

**A QUASI EXPERIMENTAL STUDY TO EVALUATE THE  
EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION  
TECHNIQUE ON STRESS AMONG SCHOOL TEACHERS IN  
SELECTED PRIVATE HIGHER SECONDARY SCHOOLS AT  
PUDUKKOTTAI.**

**By**

**A. KANAGA JOTHI**



**A DISSERTATION SUBMITTED TO THE TAMILNADU Dr. M.G.R.  
MEDICAL UNIVERSITY, CHENNAI IN PARTIAL FULFILLMENT  
OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF  
SCIENCE IN NURSING**

**OCTOBER 2015**

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CERTIFIED THAT THIS IS A BONAFIDE WORK OF

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SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
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**TO WHOMEVER IT MAY CONCERN**

This is to certify that the Ethical committee of Karpaga Vinayaga College of Nursing, Pudukkottai has discussed with its members the topic” **A QUASI EXPERIMENTAL STUDY TO EVALUATE THE EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON STRESS AMONG SCHOOL TEACHERS IN SELECTED PRIVATE HIGHER SECONDARY SCHOOLS AT PUDUKKOTTAI.**” during the year 2014-2015 adopted by **Ms. A. KANAGA JOTHI** and its implications on study subjects for her thesis for M.sc Nursing programme and the committee passed clearance for the same topic for her to pursue.

**ETHICAL COMMITTEE**

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**"Come to me, all you that are weary and are carrying heavy Burdens and I will give you rest."**

-  
MT: 11

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## ABSTRACT

A Quasi Experimental study to evaluate the effectiveness of progressive muscle relaxation technique on stress among school teachers in selected private higher secondary schools at Pudukkottai was undertaken by Ms. A. Kanaga Jothi in partial fulfillment of the requirement for the degree of Master of Science in Nursing at Karpaga Vinayaga college of nursing affiliated under Dr. M.G.R Medical University, Chennai, October 2015

## OBJECTIVES

To assess the pretest level of stress among private higher secondary school teachers before demonstrating progressive muscle relaxation technique in experimental group and control group.

To assess the post test level of stress among private higher secondary school teachers after demonstrating progressive muscle relaxation technique in experimental and control group.

To evaluate the effectiveness of progressive muscle relaxation technique among private higher secondary school teachers in experimental group.

To find out the association between the post test level of stress among private higher secondary school teachers with their selected demographic variables in experimental group.

Conceptual framework	:	Kenny's Open System Model
Research design	:	Quasi Experimental, Non Randomized control group Design (pre test post test control group design) E O1 X O2 C O1 O2
Population	:	Private higher secondary school teachers, aged between 21-40 years
Sample size	:	60 sample, 30 in experimental group and 30 in control group
Sampling	:	Non Probability – Purposive sampling technique

Setting	:	Private Higher Secondary Schools, Pudukkottai
Tool	:	Modified NIOSH [National Institute for Occupational Safety and Health] generic job stress scale
Data collection	:	A Quasi Experimental, Non randomized control group (pre test post test control group) design was used. The timing of data collection was 6 weeks. 6 teachers were selected per day. Progressive muscle relaxation technique was given at 20 to 30 minutes to reduce the level of stress.
Data analysis	:	Descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (paired “t” test, unpaired “t” test and chi square) were used to test the research hypotheses.

## **MAJOR FINDINGS OF THE STUDY**

1. Experimental group teachers had experienced mild and moderate level of stress, when compared with control group.
2. There was a significant difference in the level of stress of progressive muscle relaxation technique between control and experimental group.
3. There was a significant association between the level of stress with selected demographic variables in experimental group.

## **CONCLUSION**

1. Progressive muscle relaxation was simple and effective method and reduce the stress among private higher secondary school teachers.
2. Progressive muscle relaxation technique helps to relieve the stress and promote the well being.

## **CHAPTER I**

### **INTRODUCTION**

#### **BACKGROUND OF THE STUDY**

##### **"An Anxious Mind Can Not Exist In A Relaxed Body" -**

**Edmund Jacobson, MD**

Stress is a common feature in our lives, especially as the pace of development increases. Work is a common term which is applied for all sorts of occupation. It is a basic condition for most people and is an important component of the atmosphere for human survival. It is also a major element for the development of the individual as well as the economy of the nation. Many adults spend half of their lives in work related activities. It is natural to experience work related stress or tension or strain in the body or the mind if there is no release or outlet for the bent-up feelings. It is a silent killer in the modern age.

Teaching is one of the most important and noble profession in the world. According to WHO, "Health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity".

In India, a large number of teachers are facing stress. The term '**stress**' is derived from a Latin word "**shrings**" which means to "**draw light**". The term stress 'tensions' resulting from factors that tend to alter the existent equilibrium in people.

The concept 'stress' was first introduced in the life sciences by "**Hans Selye**" in 1956. He defined stress as " the non specific response of the body to any demand" or common result of exposing to anything.



In recent years, innovation in education has risen to prominence which changed the traditional role of teachers from using ‘talk and chalk’ method to being more pupil centered. As a result, the teaching profession has been categorized as an occupation at high risk for stress.

Similarly in Tamil Nadu, after the introduction of scientific study approach and the Innovative methods of teaching active based learning and active learning method. The teachers have been entrusted with new responsibilities for enhancing the status of teaching and learning achievement.

Griffith Jayen et.al (2010) Teaching in schools are subjected to varied activities where in they have to strain their body, mind and soul. For emerging successful in the assigned tasks, these situations are ever changing as the days turnout from Monday to Saturday, while discharging such baffling responsibilities pertaining to different roles, the teacher has to cope with circumstances that may cause stress capable of disturbing his or her normal teaching behavior.

Manivannan et.al (2007) stress is a term in both psychology and biology. First coined in the biological context in 1930s, more recent decades commonly used in all areas. Stress is a feeling that is created when we react to particular events.

Occupational stress is one of the concerning in working environment or their nature of work that causes each individual suffering from stress.

Teacher stress can be defined as the experience by a teacher of unpleasant negative and nervousness, resulting from some aspect of their work.

The teacher are exposed to a guide variety of multidimensional stressors, within the work situation, inadequate working conditions, role conflict, ambiguity, pupil problem, time pressures and redundancy work pressure, little participation in decision

making, distribution of tasks, stereo types discrimination and crown of all inadequate salaries.

Progressive muscle relaxation (PMR) is a deep relaxation technique that has been effectively used to control stress and anxiety, relieve insomnia and reduce symptoms of certain types of chronic pain. Progressive Muscle Relaxation is also used to relieve stress, it can also relax the muscles and regulate blood pressure, heart rate and respiration.

Progressive muscle relaxation is a systematic technique for managing stress and achieving good muscle relaxation, given by Dr.Edmund Jacobson in 1930s. It is an effective and widely used strategy for stress relief. It involves a two step process in which you systematically tense and relax muscle groups of the body. With regular practice of progressive muscle relaxation, it gives an intimate relief from tension and brings complete relaxation within different parts of the body. Deep breathing can be combined with progressive muscle relaxation for an additional level of relief from stress.

## **SIGNIFICANCE AND NEED FOR THE STUDY**

Kyriako's(1989) defined Teachers stress is the unpleasant emotion such as tension, frustration, anxiety, anger and depression, resulting from aspects of work as a teacher. "Research has shown that teacher along with social worker linguists are most affected by rising stress in their respective work environment. One out of three teacher report teaching as being very or extremely stressful, causing the teaching profession to have the highest annual turnover rate. Profession other than teaching have an average annual turnover rate of 11% while the annual turnover rate for teachers is 15.7%.

In Tamil Nadu, they consist of 30,134 male and 77,728 female teachers. 34,824 teachers are working in Private schools. More than two-thirds of the teachers are women having 67.6% of stress.

World Health Organization (2014) reports that 50% employees in India are in high stress, 30% have problems of marital discord, 20% suffer from depression, 49% of people under stress are suffered from stomach upset or nausea.

Education Staff Health Survey (2014) report stated that 88% of people working in education have suffered from stress, 72% anxiety and 4% had depression. The leading cause of stress were work load, rapid place of change, unreasonable demands from supervisors and changes in students behavior.

Teachers Assurance Survey (2013) reveals that 76% of teachers believe that work place stress is making them ill, 56% of teachers believe that they would do a better job if they were more stressed, similarly 73% of teachers stated that their job was having a negative impact on their well being, 64% of teachers feel that their professional ability and confidence was being damaged.

The NIOSH (National Institute for Occupational Safety and Health) (2008) reported that it is an excellent resource that sites that following 40% of workers reported that their job was extremely stressful. 25% view their jobs has the number of stress in their lives. 29% of workers felt quite a bit or extremely stressed at work , 26% of workers said they were often or very often burned out or stressed by their work. Job stress is more strongly associated with health complaints and family problem.

Michael miller (2005) “ATTITUDES IN WORKPLACE” stated that 80% of workers feel stress on the job they need help how to manage stress and 20% have felt like screaming or shouting because of job stress. 9% are aware of an assault in their workplace and 18% had experience some sort of threat or verbal intimation.

Actions or situation that place physical or psychological demonstration on people with overtime work will cause stress. Both physical and mental stress is altered their normal and healthy growth and decrease their productivity. But if not managed properly, stress can eventually lead to burnout as well as to physical problems. In the workplace, the chief causes of stress is the feeling of inequity. Easy and economical treatment of the workplace stress includes processions for music and physical exercise with suggestions for rest, diet and meditation can also reassign tasks and provide more flexible work schedules. Workplace stress is expensive because it can cause absenteeism, increased sick leave and medical costs and high turnover rates.

According to Mahatma Gandhi, "A Sound Mind In a Sound body". So mind can be very well achieved by using this progressive muscle relaxation technique for school teachers in their stress reduction.

Hence the researcher felt that the teacher's increased level of stress may have an impact on their teaching as well as their productivity which in turn will affect the academic performance. With these in mind, I have selected this topic for my research study. Progressive muscle relaxation technique was found to be very effective in relaxing the mind of the teachers.

## **STATEMENT OF THE PROBLEM**

A quasi experimental study to evaluate the effectiveness of progressive muscle relaxation technique on stress among school teachers in selected private higher secondary schools at Pudukkottai.

## **OBJECTIVES**

To assess the pretest level of stress among private higher secondary school teachers before demonstrating progressive muscle relaxation technique in experimental group and control group.

To assess the post test level of stress among private higher secondary school teachers after demonstrating progressive muscle relaxation technique in experimental and control group.

To evaluate the effectiveness of progressive muscle relaxation technique among private higher secondary school teachers in experimental group.

To find out the association between the post test level of stress among private higher secondary school teachers with their selected demographic variables in experimental group.

## **HYPOTHESIS**

The following research hypothesis was setup for the study.

At  $p < 0.05$  level of significance.

H1 - There was a significant difference between the pre test and post test level of stress among private higher secondary school teachers in experimental group.

H2 - There was significant difference between the post test level of stress among private higher secondary school teachers between experimental and control group.

H3 - There was significant association between the post test level of stress with their selected demographic variables among private higher secondary school teachers in experimental group.

## **OPERATIONAL DEFINITION**

### **1. EVALUATE**

In this study, it refers to the extent to which progressive muscle relaxation technique helpful in reducing the stress of school teachers.

### **2. EFFECTIVENESS**

In this study, it refers to the improvement in level of well being as determined by significant difference between the pre and post test level of well being.

### **3. PROGRESSIVE MUSCLE RELAXATION**

In this study, it refers to a systematic relaxation technique for managing stress of school teachers who will contract each muscle group and relax it for about 3 - 5 seconds which relieves the school teachers stress.

### **4. STRESS**

In this study, it refers to physical and mental strain which demands free adjustment of the individual to the environment. It is measured by NIOSH[National Institute for Occupational Safety and Health] Generic job stress scale.

### **5. HIGHER SECONDARY SCHOOL TEACHERS**

In this study, it refers to a person who finished post graduate, B.Ed, M.Ed and job is to teach subjects like Maths, physics, chemistry, biology, computer science, accountancy, commerce and economics . They are taking class for 11th and 12th standard those who are working in private schools.

## **ASSUMPTION**

- Demographic variables of Higher secondary School teachers may experience some level of stress.
- Progressive muscle relaxation technique is a cost effective, non pharmacological management and has no side effects.

**DELIMITATION**

The study is delimited to 60 Samples only.

**PROJECTED OUTCOME**

- The study will enable to identify the stress level among higher secondary school teachers. The findings of the study will help the researcher to plan progressive muscle relaxation technique for stress reduction and motivate the school teachers and remains in their for longer.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

It refers to an extensive, exhaustive and systematic examination of publications relevant to the research project.

- BT.Basavanthapa 2007.

Review of literature is an essential component of the research process. It is a critical examination of publication related to the topic of interest and review should be comprehensive. It helps to plan and conduct the study in a systematic and scientific manner.

For the present study, the related literature was reviewed and organized under the following headings.

- Literature review related to stress
- Literature review related to Studies on stress among higher secondary school teachers.
- Literature review related to progressive muscle relaxation technique
- Literature review related to Studies on progressive muscle relaxation technique.
- Literature review related to Studies on progressive muscle relaxation technique on stress reduction

#### **Literature review related to stress**

Amana preet kaur(2013) stated that, stress is a universal phenomenon. Stress is a physiological or psychological tension that threatens homeostasis or person's psychological equilibrium. It has 2 types like positive stress and negative stress. Stress cycle includes loss of control, negative feelings, self esteem drops, relationship deteriorates, try harder in doing work. It is classified into physiologic and day to day stressors. The power sources are conflict, unemployment, frustration and life's little hassles. The symptoms are dilated pupils, diaphoresis, increased heart rate, anger,



depression. The stress will cope up by physical skills like breathing exercises, progressive relaxation, stretching exercises and the mental skills are meditation, social diversion, yoga.

Pawan Sharma (2013) stated that, stress has been defined as a real or perceived threat to the physiological or psychological and behavioral response. The stressors are internal or external. The types of stress include eustress or positive stress, distress or negative stress. The models are the general adaptation syndrome and the unified stress model. Adequate coping mechanisms administered to the activating stimulus for quick adaptation and restoration of homeostasis. Then inadequate coping mechanisms lead to lock or breakdown in adaptation.

Shebeer P. Sasheer (2012) stated that, stress can lead to negative or counterproductive feelings or threaten emotion well being, that precipitating the changes are called stressors. The characters are natural, protective and adaptive, limits in ability to compensate. It involves the general adaptation syndrome. The management for stress is regular exercise, humor, nutrition, diet rest and relaxation techniques.

Mary C. Townsend (2012) stated that, stress defined as adaptive response behavior that maintains the integrity of the individual, stress as a biological response, environmental event and transaction between the individual and the environment, the predisposing factors are genetic influences, past experiences and existing conditions. The stress management is coping strategies. The adaptive coping strategies such as awareness relaxation meditation, interpersonal communication with caring other, problem solving, pets and music.

Brunner and Suddarths (2010) said that, the term homeostasis to describe the ability of the internal environment. Any changes in the internal environment initiated a “righting” responses to minimize the change. The goal of adaptation or adjustment

coping is a compensatory process with physiological and psychological components. The stressors are classified into day to day frustration, major complexes occurrences involving large groups. The psychological responses to stress are appraisal and coping physiologic response to stress is the general adaptation and local adaptation syndrome.

R. Sreevani (2010) stated that, stress is the “non specific response of the body to any kind of demand made upon it “. A stressor is any person or situation that produces anxiety responses. It includes environmental stressors, physiological stressors, social stressors and thoughts. She has explained about the models of stress such as stimulus based model, response based model and transaction based model through this coping resources, the person can cope up the stress. The common adaptive coping techniques are problem solving, positive self talk and self acceptance, conflict resolution and community living skills. The coping strategies are four. In that, 1. Adaptive 2. Palliative 3. Maladaptive 4. Dysfunction management of the stressors and the emotional problems.

### **Literature review related to Studies on stress among higher secondary school teachers**

Anbu (2014) conducted a study to find out the professional stress level of higher secondary school teachers in Nagercoil region. 200 higher secondary school teachers working in government and private schools in and around Nagercoil region was used as the sample for the present study. The occupational stress inventory developed by Dr. Joseph and Dr. Dharmangadan was used as the tool for this survey. The collected data from the sample was subjected to SPSS versus 16 packages for analysis this findings reveals that the demographic factors like gender, type of school and marital status of the teachers have significant impact upon their stress level, where as the professional qualification, location of the school, medium of instruction and

their years of teaching experience did not differ significantly in their level of professional stress component. The findings are gender Male 67 with SD16.57 Calculated 't' value of 3.23 Significant at 0.05 level and Type of Management private. 102 with SD 7.871, calculated value 4.730 and it is significant.

Arula Kumari (2014) conducted a study on occupational stress in school teachers. Standardized occupational stress scale was used for the school teachers. The findings reveals that the impact of demographic factors and type of job found that 41.5% of teachers are "highly stressed", 58.5% are 'low stress' category. This shows that the highest percentage of job related stress, that can be corrected by doing exercise regularly.

Srinivasan (2014) conducted a study on stress faced by private school teachers. The present study reveals that majority of teachers are females. Hindus constituted 63%, while Christians 25% and remaining 12% were Muslims. Three fourth (76%) in the total respondents stated that their family is not supportive to them. As the majority of the teacher respondents were females having more responsibility to take care of the family along with occupational personal stress.

P.Mohanraj (2013) conducted a study on stress level among higher secondary school teachers. In that present study, complex and competitive environment stress level is increased among school teachers due to various reasons. Stress is physical, mental and chemical reasons to circumstances that frighten confuse and irritate. Stress is the common term applied to the pressure, where people feel in life. This study is an overall effort to measure the relationship of socio economic factors and level of stress among higher secondary school teachers in erode district and is mainly aimed to know the various economic and demographic attributes of the teachers. It is noted from the above table that the calculated 't' value (3.738) is higher than the table value (2.58) and the result is significant at 5% level.

Dr.S.Jeyaraj (2013) conducted a study on occupational stress among the teachers of the Higher secondary schools in Madurai district. The aim of the study is to determine the occupational stress level of Government and aided higher secondary school teachers living in different socio cultural and economic situation. The scale used in the study has been developed by researchers. 185 private school teachers and 120 government teachers have participated in the present study. At end of the study it was seen that private school teachers have more occupational stress level than government school teachers. There is a meaningful difference in the stress level points of Government and private higher secondary teachers. Occupational stress results showed that teachers who reported greater stress were less satisfied with teaching reported greater frequency of absenteeism. They were more likely to leave teaching and less likely to take up a teaching career again. Chi-square test has been applied, the result is 10.53 and table value at 5 per cent level of significance is 9.488 in degrees of freedom 4. As the calculated chi-square value is more than the table value.

Dr.K.Ramamoorthy (2013) conducted a study on individual interpersonal and organizational factors that influence occupational stress among Higher secondary school teachers in Madurai district. In that study, there were 3 organizational factors that were measured individual, interpersonal and organization. A total of 305 teachers participated in this study 185 were from the private aided schools and 120 from the government schools. The prevalence of stress was found higher in higher secondary teachers in aided schools with the percentage of 17.70% compared to the Government higher secondary teachers of 15.80%. The varimax rotated principal component was conducted for this present study to measure the stress factors amount the teachers. All three factors were significantly associated with occupational stress of Higher secondary teachers particularly the following variables affect the performance of the aided higher secondary teachers.

Dr.Usha A.Borkar (2013) conducted a study on effectiveness of higher secondary school teachers in relation to teacher stress. This study was aimed to study the effectiveness of secondary school teachers in relation to teacher stress. The objectives were to study and compare teachers of Mumbai region and to ascertain relationship between teacher effectiveness of secondary school teachers and the teacher stress. The descriptive method of the comparative and co relational type of research employed for this study. The multistage sampling technique was used to select 1000 teachers from secondary schools situated in different regions of Mumbai. Thane and Raiged areas of Maharashtra for the study. The researcher made tool was used to collect for this study. Findings of this research indicate that less effective teachers are under a higher level of stress than the highly effective teachers. The findings further revealed that the teacher stress is negatively correlated with teacher effectiveness. The study also revealed that teacher stress also varied in male teachers and female teachers despite the fact that both were equally placed in terms of salary and work load. The Mean scores on Teacher Stress for highly effective and less effective teachers are 89.67, 97.95 and for the total group of teachers the Mean value is 92.94. The value of SDs are 15.21,15.14 and 16.11 respectively for the highly effective, less effective and total sample of Secondary School teachers. The t-value is calculated as 4.98, which is significant at 0.01 level of confidence.

Dr.G.Lokanadha Reddy and Dr.R.Vijaya anuradha (2013) conducted a study on occupational stress of higher secondary teachers working in Vellore district. This study examined the occupational stress of teachers working at higher secondary teachers working at higher secondary level. 377 higher secondary teachers from Vellore District were chosen as a sample, by using simple random sampling technique and administered with an occupational stress Rating scale. The statistical technique employed were percentage, mean, SD, mean, "t" test if test and stepwise multiple regression analysis and the obtained results are analyzed accordingly, it was found that

249 (76.1%) teachers are experiencing moderate level of stress, followed by 42 (12.8%) teachers with high stress and 36 (11.0%) teachers with low stress. The findings reveals that higher secondary school teachers experienced stress in their work in terms of workload and demands from supervisors.

### **Review related to progressive muscle relaxation technique**

D. Elakkuvana bhaskara raj (2014) stated that one technique of relaxation is progressive muscle relaxation. The client focuses on skeletal muscles and alternatively contracts and relaxes them. Nurses in all settings can learn and teach relaxation responses to clients.

Ravinder kaur (2014) stated that progressive muscle relaxation technique is most often used relaxation training, developed by psychiatrist Edmund Jacobson. In this, client must learn to relax through deep muscle relaxation training. Patient relax major muscle in a fixed order, beginning with the small muscle group of the feet and working cephal head or vice versa.

Potter and Perry (2012) stated that progressive muscle relaxation training teaches the individual how to effectively take rest and reduce tension in the body. Progressive relaxation technique involves the use of slow, deep, abdominal breathing while tightening and relaxing an ordered succession of muscle group.

Taylor (2011) stated that relaxation can be useful whether a patient in experiencing single stressful event such as surgery or chronic stress progressive muscle relaxation benefits include reduced anxiety muscle tension and pain, improved functioning of immune system, enhanced sleep and rest and an improved over all sense of well being.

R. Sreevani (2010) stated that progressive muscle relaxation is a method of deep muscle relaxation which is based on the premise that the body responds to

anxiety provoking thoughts and events with muscle tension. Excellent results have been observed with this method in the treatment of muscular tension anxiety, insomnia, depression, muscle spasms, mild phobias and stuttering.

Dr. K. Lalitha (2010) stated that progressive muscle relaxation is a potent treatment strategy for dealing with a variety of client problems such as psycho physiological distress, chronic sleeplessness, anxiety reduces. Edmund Jacobson recognized that muscle relaxation was a therapeutic tool for stress related problems.

Gail w. Stuart (2007) stated that relaxation techniques are an accepted therapeutic strategy and often are used in psychotherapy particularly in patient with anxiety disorder. Progressive muscle relaxation uses process of tensing and relaxing group of muscles starting from facial muscles and moving down the body to the muscle in the feet. Individual learn the systematic technique and gain control over anxiety provoking thoughts and muscle tension.

Niraj Ahuja (2006) stated that progressive muscle relaxation is the most frequently used technique. The patient first tenses and then relaxes major muscle groups of the body in a prefixed and systematic order, usually beginning at the top of the body and progressing downwards.

S. Nambi (2006) stated that relaxation therapy aims to producing relaxation to those with anxiety and stress related problems. Progressive muscle relaxation produces physiological changes like decreased heart rate, decreased oxygen consumption, decreased respiratory rate.

### **Literature review related to Studies on progressive muscle relaxation technique.**

Febu Elizabeth Joy (2014) conducted a study on effectiveness of Jacobson's progressive muscle relaxation technique on social anxiety among high school adolescents in a selected school of Udupi district, Karnataka. The purpose of this exploratory study was to identify the adolescents with social anxiety and teach the JPMR technique to those who would score high on social anxiety scale. The data were collected from 193 high school adolescents using demographic Proforma, social anxiety scale for adolescent and tool to assess the associated factors of social anxiety. The JPMR technique was administered to the adolescents with moderate to severe social anxiety. The findings are 27% adolescents were having moderate social anxiety and there was significant association between the age of the adolescents and social anxiety. The Jacobson's progressive muscle relaxation technique was found to be effective. The mean difference between pre test and post test scores (14.45) was significant at 0.05 level ( $t = 10.646$ , difference = 39,  $p = 0.001$ ) indicating that JPMR therapy was effective in reducing the social anxiety.

Arunima Chaudhary (2014) conducted a study on effect of progressive muscle relaxation on the adverse cardiovascular profile in women with polycystic ovarian syndrome. The aim of the study is to effect of progressive muscle relaxation on the stress levels of patient and their influence of the cardiovascular risk factors. The prospective pilot project was conducted to 100 patients in a tertiary care hospital of West Bengal. After receiving approval from the institutional ethical committee and informed consent from subjects. The perceived stress scale was significantly less in subjects practicing relaxation exercises, as compared to subjects only on medication.

Dr. H.M. Patell (2014) conducted a study on effect of relaxation technique on blood pressure in essential hypertension. For almost a century there has been constant speculation on the relationship between life stress, the individual's response and the blood pressure changes. 84 hypertensive individuals are randomly selected and



decided in group I and 26 subjects in group II completed the study. Results show a significantly higher systolic (143.1 vs 121 mmHg) and diastolic (92.13 vs 76.35 mmHg) blood pressure in hypertensive group compared to control to basal condition. The progressive muscle relaxation technique by decreasing sympathetic tone probably reduces systolic blood pressure. Thus it is found to be a valuable and adjust to the treatment of essential hypertension in young hypertensive.

Maryam Zargarzadeh (2014) conducted a quasi experimental study on the effect of progressive muscle relaxation method on test anxiety in nursing students in School of Isfahan University of medical sciences. It was conducted in 3 states with two group of study and control study population comprised all term 3 male and 4 female students. The results obtained in the present study showed that subjects mean ages in the study and control groups were 22.42 and 21.72 years. The results of the present study revealed the effect of PMR on reduction of test anxiety in nursing students.

Vancampfort D (2013) conducted a study on progressive muscle relaxation in person with schizophrenia. Randomized controlled trails were considered if they investigated progressive muscle relaxation in patient with schizophrenia. It involving 146 patients met in this inclusion criteria progressive muscle relaxation can acutely reduced the anxiety and psychological distress and improve subjects where persons with schizophrenia.

### **Literature related to studies on progressive muscle relaxation technique on stress reduction**

Bommareddi Prameelarani, M.Sc Nursing Post Graduate (2015) conducted a study on Jacobson's Progressive Muscle Relaxation (JPMR) Training to Reduce Stress among People Living with HIV. The sampling method used for this study is One group pretest posttest design was used. Thirty People living with HIV admitted in District Hospital at ART center, Udupi were selected and demographic and diseases

specific proforma and stress scale for people living with HIV were administered. Purposive sampling technique was used for the study. the results shows that Out of 14 subjects, the most experienced ART side effects were weakness 16.7% (14), followed by vomiting 10% (3). Out of 21 subjects, 43.30% (14) had tuberculosis, 20% (6) had candidiasis. The least experienced opportunistic infections were pneumocystis pneumonia 6.70% (2). Out of 30 subjects, Maximum number of subjects experienced severe stress 43.3% (13). There was significance difference between mean difference of pretest and post test scores of stress ( $t=9.727$ ,  $df=29$ ,  $p=0.001$ ). The JPMR training was effective in reducing the stress. Stress is dependent on CD4 count ( $t=13.022$ ,  $df=4$ ,  $p=0.01$ ).

Dr.Arunima chaudhuri (2015) conducted a study on effect of progressive muscle relaxation on reducing stress in female health care professionals. The aim of the study is to detect the stress level among female health care professionals in the age group of 25 – 35 years and its impact on health. A prospective cross sectional study was conducted in a tertiary care hospital in eastern part of India. Females with scores above 200 were selected for this initial assessment of anthropometric assessment, electrocardiogram lipid profile analysis, resting pulse rate, blood pressure, physical fitness index, and breathe holding time, isometric handgrip tests results are evaluated and recorded. Perceived stress scale values are evaluated by using SPSS package. Results are significantly reliable. Results of BHT (BHT: Pre 40.5 [4.3] vs. post 44.5 [2]), IHG tests (IHG: Pre 17.7 [2.4] vs. post 19.3 [1.3]) and PFI (PFI: Pre 80.4 [7.2] vs. post 85.5 [4.8]) were significantly increased after PMR training. There was a significant decrease in total cholesterol, triglyceride and low- density lipoprotein (LDL) cholesterol in subjects after practicing PMR for 3 months.

Sirous Sarvghad (2014) conducted a study on the effectiveness of progressive muscle relaxation technique on occupational stress and quality of working life on nurses at Shahid Behest hospital of Shiraz. The purpose of present research was to

investigate the effect of applying progressive muscle relaxation technique on job stress and quality research was to investigate the effect of applying progressive muscle relaxation technique on job stress and quality of working life in nurses. Sampling included 30 nurses in experimental group and 30 in control group using multi stage cluster sampling method. Data were collected by Reiss questionnaire of job stress and Mirepasi questionnaire of quality of working life. The research design was pre test post test with a control group. Data were analyzed through multivariate analysis of co – variance. there is a significant difference between nurses in control and experiment group. ( $p < 0.0001$  and  $F = 123.17$ ) the rating of difference of effectiveness is 0.90, i.e. 90 percent of personal differences in scores of post-test (occupational stress and working life quality) is the effect of applying progressive muscle relaxation technique. Moreover it was shown in table 3 that with a control pre-test between nurses of experiment group and control group regarding occupational stress ( $F = 120.94$  and  $p < 0.0001$ ) and quality of working life ( $F = 115/93$ ,  $p < 0.0001$ ) a significant difference exists. The results showed that applying progressive muscle relaxation technique reduces job stress and increase the quality of working life of nurses.

Ms.Palak Patel (2014) conducted a study to assess the effectiveness of progressive muscle relaxation therapy on stress among staff nurses working in selected hospitals at Vadodara City. Pre experimental one group pre test and post test research design was adopted to achieve a goal of the study by using instrument that is demographic data and stress assessment scale among 30 staff nurses. The findings of the study revealed that in pre test, most of the nurses 53.3% had moderate stress, 40.0% had mild stress and 6.7% had scores stress. The post test most of the nurses had mild stress 73.3% and no stress 26.7%. It is concluded that progressive muscle relaxation therapy is effective is reducing the stress level of staff nurses.

Praseedap Nair (2014) conducted a study on effectiveness of progressive muscle relaxation in reducing academic stress of secondary school students in Kerala.

Students are in such a competitive busy world that they have to struggle with lot of stressors in their daily life. The present study focused on the importance and effectiveness of progressive muscle relaxation for students to reduce their academic stress. Academic stress inventory scale was used 60 students were selected. The result of the study revealed that progressive muscle relaxation is significantly effective for reducing academic stress of students. The findings of the present study showed a significant decrease in the post-intervention health related stress scores ( $t=37.68$ ,  $p<0.05$ ). These findings are supported by other study findings where PMR training was effective in the reduction of symptoms of stress ( $t= -4.248$ ,  $p<0.001$ ) and perceived stress ( $p<0.001$ ).

Maria Saju (2012) conducted a study on effectiveness of Jacobson's progressive muscle relaxation technique on level of stress among adolescents in selected schools Bangalore. The study was conducted in selected private schools between the ages of 12 – 16 years. 60 students are selected probability simple random sampling techniques was used perceived stress scale is used. The findings of the present study Jacobson's progressive muscle relaxation technique was effective in adolescents in experimental group. The results showed that progressive muscular relaxation exercises were effective in reducing pain as well as stress ( $p < 0.001$ ).

Ms.P.Antony Jebamali Packiam (2011) conducted a study to evaluate the effectiveness of progressive muscle relaxation on stress education among school teachers in selected schools at Coimbatore. 60 school teachers were selected by convenient sampling technique. Modified NIOSH Job stress scale was sued to assess the level of stress among school teachers. The findings of the study mean score of stress in post test was significantly lower than the pre test score 't' test value was highly significant at 0.05 level and t value 26.55 and  $r=0.7874$ . The progressive muscle relaxation was effective in reducing stress among school teachers.

## CONCLUSION

The above review of literature shows that the higher secondary school teachers are encouraged to do practice of progressive muscle relaxation technique daily to relieve stress. It will be effective.

## CONCEPTUAL FRAMEWORK

The conceptual framework selected for the study is based on Kenny's Open System Model. All the living system is open, in this there is continuous exchange of matter, energy and information. Open system has changing degree of interaction with the environment from which the system receives input and gives back output in the form of matter, energy and information.

The main concept of open system model are input, throughput, output and feedback. The study is undertaken to determine the effect of Jacobson progressive muscle relaxation technique on the stress level. Pretest was conducted to assess the level of stress among school teachers.

### INPUT

Input can be matter, energy and information from the environment. In this present study the environment refers to private higher secondary school and refers to the collection of demographic variables from the samples such as age, sex educational status, marital status, number of children, monthly income, family support, travel distance, mode of travel, working hours, working environment, total work experience and type of employment.

### THROUGHPUT

The matter, energy and information are continuously processed throughput the system which is also called complex transformation known as throughput process is used for input. In this present study the throughput refers to pretest, Jacobson

progressive muscle relaxation technique on stress reduction among samples who are regularly practicing Jacobson progressive muscle relaxation technique.

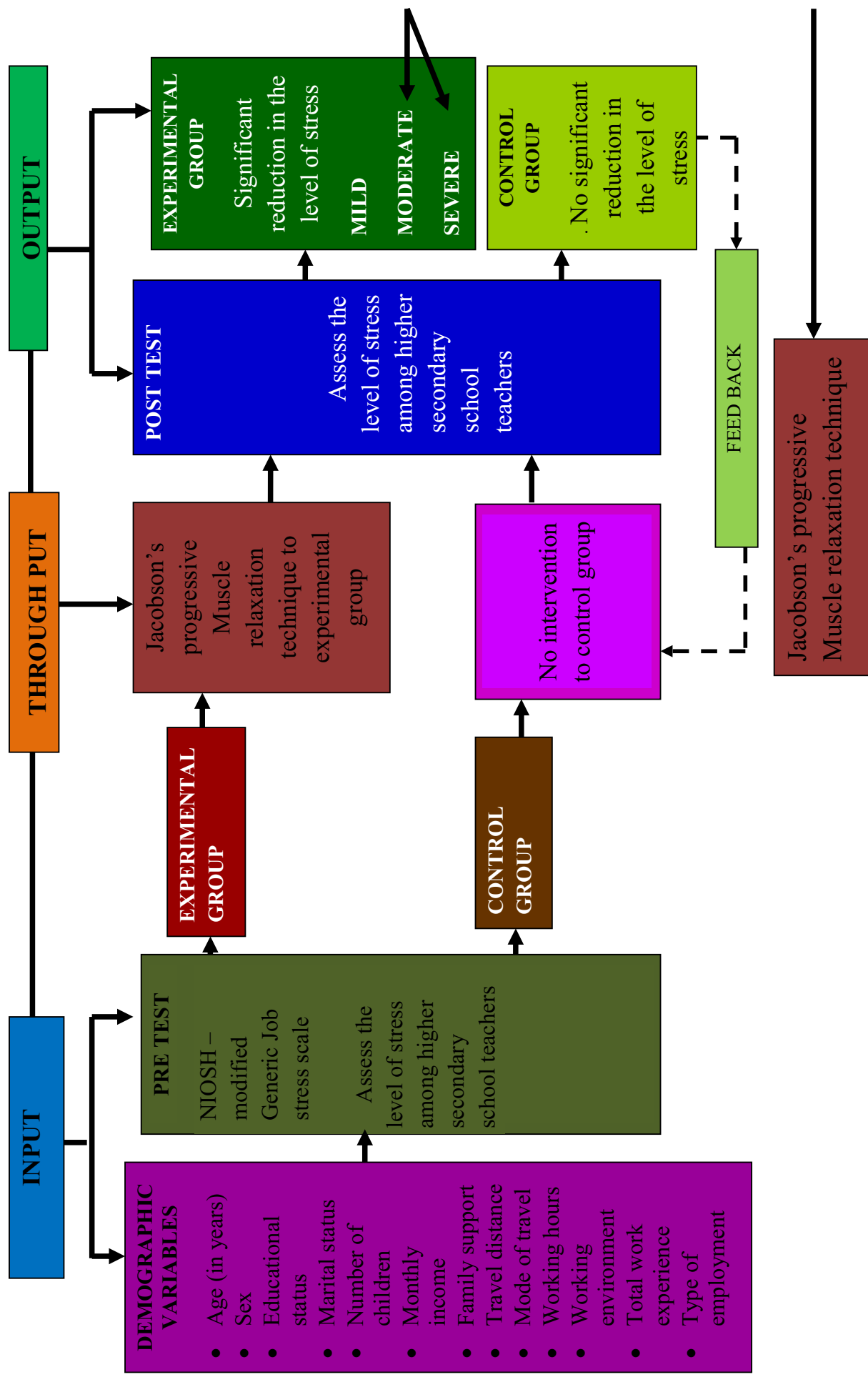
## OUTPUT

After processing the input and throughput, the system returns to the output matter, energy and information in an altered state. In the present study significant changes in the level of stress of the experimental group and no significant changes in the control group as output.

## FEEDBACK

Feedback gives information about environment response to the system. Output is utilized by the system in adjustment, correction and accommodation to the interaction with the environment. In the present study, effectiveness of Jacobson's Progressive Muscle Relaxation Technique is considered in calculating mean percentage and testing hypothesis.

**Figure :1 MODIFIED CONCEPTUAL FRAMEWORK BASED ON J.W. KENNY'S OPEN SYSTEM MODEL**



## **CHAPTER III**

### **RESEARCH METHODOLOGY**

Research methodology involves the systematic procedures by which the researcher starts from initial identification of the problem to its final conclusion. The methodology consists of procedure and techniques for conducting the study.

- Sharma (1990)

#### **RESEARCH APPROACH**

Quantitative approach was used to evaluate the effectiveness of progressive muscle relaxation technique.

#### **RESEARCH DESIGN.**

Quasi Experimental Design Non randomized control group design [pre test post test control group design] was used for this study.

Group	Pretest	Intervention	Post test
Experimental	O1	X	O2
Control	O1		O2

O1	→	Pre test stress level in experiment group and control group
O2	→	Post test stress level in experimental group and control group
X	→	Progressive muscle relaxation technique

#### **VARIABLES**

Independent variables: Progressive muscle relaxation technique

Dependent variables: Stress level of higher secondary school teachers



## **SETTING OF THE STUDY**

The study was conducted in selected schools, Pudukkottai which is situated around 10 kilometers from Karpaga Vinayaga College of nursing.

1. Karpaga Vinayaga higher secondary school Sivapuram Pudukkottai, which is situated near to the Karpaga Vinayaga college of nursing. 15 teachers were working in this school.
2. MRM higher secondary school, Sivapuram Pudukkottai which is situated 2 km away from Karpaga Vinayaga college of nursing. 18 teachers working in this school.
3. SFS higher secondary school, Kalif Nagar Pudukkottai which is situated 5 km away from Karpaga Vinayaga college of nursing, 17 teachers working in this school.
4. Sri Kulapathi Balaiha higher secondary school, east 2nd street, Pudukkottai which is situated 7km away from Karpaga Vinayaga college of nursing. 18 teachers working in this school.

## **POPULATION**

The population for this study is the higher secondary school teachers.

Target population includes all the teachers working in private higher secondary schools.

Accessible population includes the teachers working in SFS, MRM, Karpaga Vinayaga and Balaiha higher secondary schools.

## **SAMPLE**

Teachers working in selected schools at Pudukkottai between the age group of 21-40 years.

**SAMPLE SIZE**

The sample size for the present study is 60 samples. In that, 30 samples were in experimental group and 30 samples were in control group.

**SAMPLING TECHNIQUE**

Non probability purposive sampling technique was used.

**SAMPLING CRITERIA****INCLUSION CRITERIA**

Higher secondary school teachers,

- Who were between the age of 21-40 years.
- Who were willing to participate in the study.
- Who can read and write in English and Tamil.
- Who were present on the time of data collection.

**EXCLUSION CRITERIA**

Higher secondary school teachers

- who were with physical illness
- who were not willing to participate
- Who were absent on the time of data collection.

**DESCRIPTION OF THE TOOL**

The instrument was developed by the investigator with the guidance of experts. It consists of 2 parts.

**SECTION - I**

Demographic variables

## SECTION - II

NIOSH [National Institute for Occupational Safety and Health] Modified Generic job stress scale.

### SECTION - I:

Demographic variables [ Age, sex, Educational status, Major Subjects Marital status, Number of children, Monthly income, Family support, Travel Time, Mode of travel, Working hours, Working environment Total work experience and Type of employment]

### SECTION - II:

NIOSH [National Institute for Occupational Safety and Health] Modified Generic job stress scale was used to assess the level of stress. The questionnaire included all the aspects of stress. It consists of 30 questions. The questions were on rating scale form. Each questions had 4 responses. Never - 1, Sometimes -2, Fairly Often -3, Always -4

## SCORING PROCEDURE AND SCORE INTERPRETATION:

The total questionnaire was 30. The total score was converted into percentage and resulting score was range as follows

LEVEL OF STRESS	SCORE
Severe	90 - 120
Moderate	60 - 90
Mild	30 - 60

## **VALIDITY**

The validity of the tool was established by consultation with guide and four experts in the field of nursing, psychiatrist and psychologist. The tool was modified according to the suggestions and recommendation given by them.

## **RELIABILITY**

Reliability was estimated in the study of subjects by using the test and retest method. The test retest was found to be  $r = 1$  and the tool was found to be highly reliable.

## **PILOT STUDY**

The tool was administered and checked for the feasibility and appropriateness. The subject chosen was similar in characteristics. Formal approval was obtained from the authority. Written consent was obtained. Pilot study was conducted for one week, the tool was administered to 6 higher secondary school teachers. They are requested to practice progressive muscle relaxation technique for everyday. On the seventh day post test was conducted. By using test retest method , the result was found to be  $r = 1$  and the tool was reliable.

## **DATA COLLECTION PROCEDURE:**

The period of data collection was conducted for one month. The investigator obtained formal permission from the management authorities of the school. Samples was selected with Non probability purposive sampling technique and Quasi experimental [pretest post test control group] design was used. The data was collected on all six days of the week. The timing of data collection was day timing. The nature and purpose of the study was explained to the higher secondary school teachers. Written consent was obtained. Progressive muscle relaxation will demonstrated to higher secondary school teachers and period of morning and evening or else their convenient. Post test was conducted on the 28<sup>th</sup> day after demonstration.

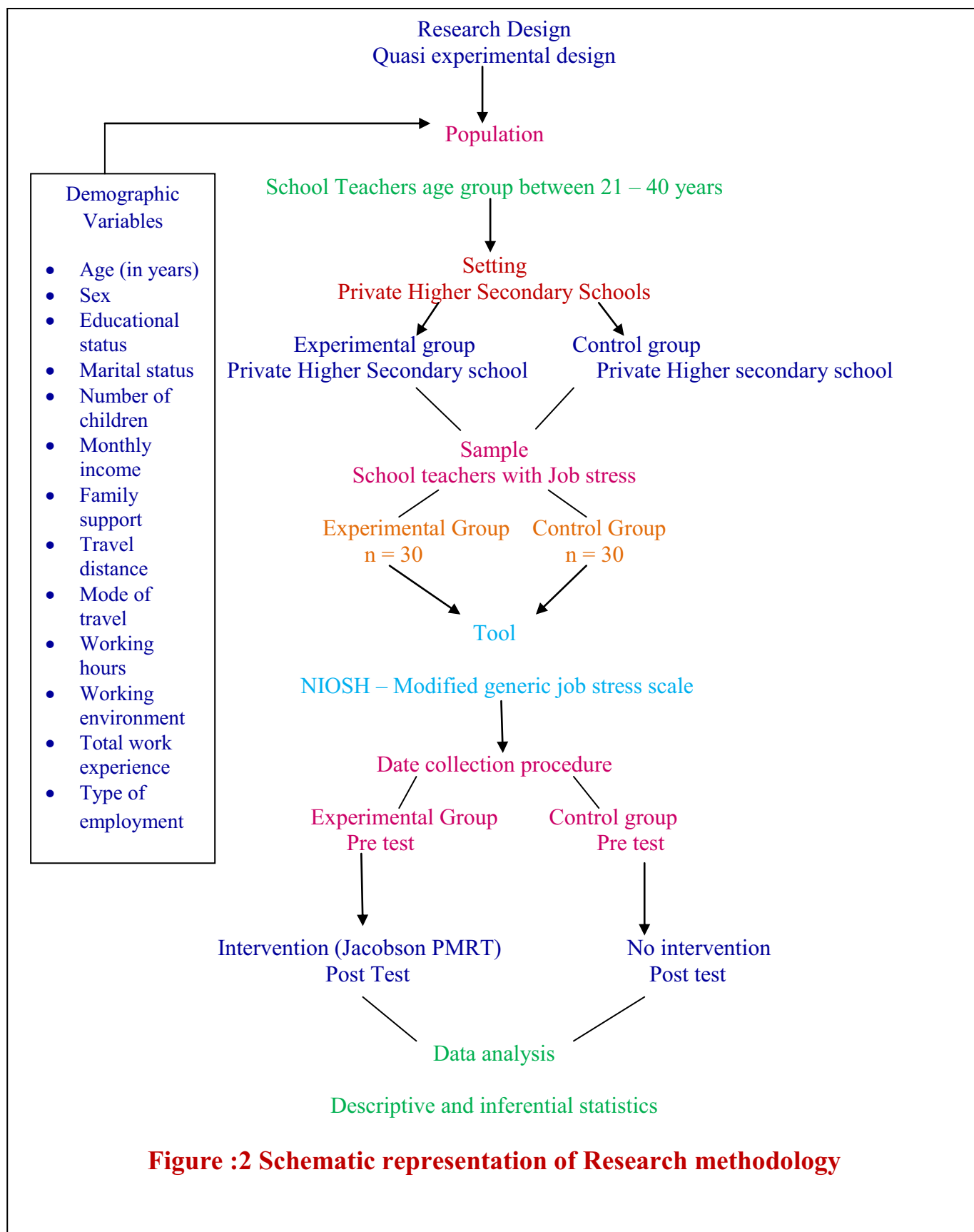
## **PLAN FOR THE DATA ANALYSIS**

The collected data was arranged and tabulated to represent the findings of the study. Both descriptive and inferential statistics was used.

- Frequency, percentage distribution was used to analyze demographic variables.
- Mean and standard deviation was used to analyze the level of stress.
- Paired't' test and unpaired't' test was used to find out the difference between pre test and post test of the group.
- Chi square test was used to find out the association between post test score and their selected demographic variables.

## **ETHICAL CONSIDERATIONS**

The main study was conducted after the approval of research committee. The purpose and other details of the study was explained to the respondents consent was obtained from them. Confidentiality was assured to the individuals regarding the study result permission was sought from the school authority. Thus the ethical practices will ensured in the study.



## **CHAPTER – IV**

### **DATA ANALYSIS AND INTERPRETATION**

The analysis is a process of organizing and synthesizing the data in such a way that the research question can be answered and hypothesis tested

Polit and Hunger, 2011

This chapter deals with the analysis and interpretation of the data collected from 60 private higher secondary school teachers (30 Experimental and 30 Control) in selected schools, Pudukkottai. The data collected was organized, tabulated and analyzed according to the objectives. The findings based on the descriptive and inferential statistical analysis are presented under the following sections.

#### **OBJECTIVES**

To assess the pretest level of stress among private higher secondary school teachers before demonstrating progressive muscle relaxation technique in experimental group and control group.

To assess the post test level of stress among private higher secondary school teachers after demonstrating progressive muscle relaxation technique in experimental and control group.

To evaluate the effectiveness of progressive muscle relaxation technique among private higher secondary school teachers in experimental group.

To find out the association between the post test level of stress among private higher secondary school teachers with their selected demographic variables in experimental group.

## **ORGANIZATION OF DATA**

- Section A:** Description of demographic variables of the private higher secondary school teachers in experimental and control group.
- Section B:** Assessment of pretest and posttest level of stress among private higher secondary school teachers in experimental and control group.
- Section C:** Effectiveness of progressive muscle relaxation technique on the level of stress among private higher secondary school teachers in experimental and control group.
- Section D:** Association of posttest level of stress among private higher secondary school teachers with their selected demographic variables in the experimental group.



## SECTION A

**DESCRIPTION OF DEMOGRAPHIC VARIABLES OF THE HIGHER SECONDARY SCHOOL TEACHERS IN EXPERIMENTAL AND CONTROL GROUP.**

**Table 1: Frequency and percentage distribution of demographic variables of private higher secondary school teachers in experimental and control group.**

**N=60(30+30)**

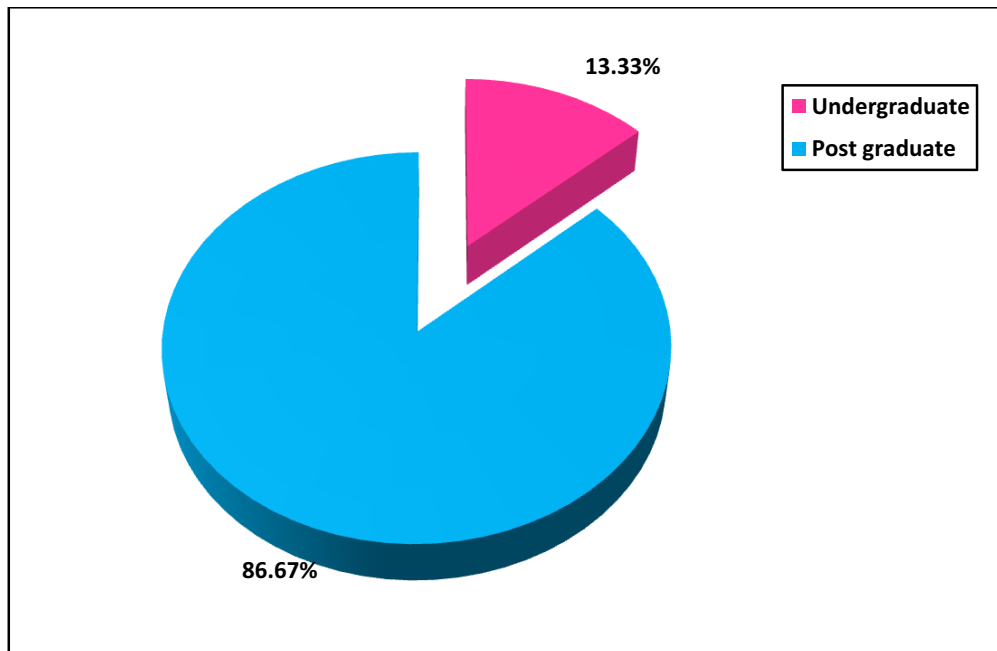
<b>Demographic Variables</b>	<b>Experimental Group</b>		<b>Control Group</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
<b>Age in years</b>				
21 - 25 years	0	0.00	0	0.00
26 - 30 years	9	30.00	16	53.33
31 - 35 years	17	56.67	11	36.67
36 - 40 years	4	13.33	3	10.00
<b>Sex</b>				
Male	5	16.67	6	20.00
Female	25	83.33	24	80.00
<b>Educational status</b>				
Undergraduate	4	13.33	3	10.00
Post graduate	26	86.67	27	90.00
<b>Major subjects</b>				
Physics	5	16.67	6	20.00
Maths	10	33.33	13	43.33
Economics	3	10.00	4	13.33
Commerce	3	10.00	1	3.33
Chemistry	3	10.00	1	3.33
Biology	2	6.67	1	3.33
Computer science	2	6.67	2	6.67
Accountancy	2	6.67	2	6.67

Demographic Variables	Experimental Group		Control Group	
	No.	%	No.	%
Tamil	0	0.00	0	0.00
English	0	0.00	0	0.00
<b>Marital status</b>				
Married	23	76.67	25	83.33
Unmarried	4	13.33	2	6.67
Widow	3	10.00	3	10.00
Divorced/Separated	0	0.00	0	0.00
<b>Number of children</b>				
No child	3	10.00	2	6.67
One child	15	50.00	19	63.33
Two child	10	33.33	7	23.33
Above two child	2	6.67	2	6.67
<b>Monthly income</b>				
Less than Rs.6000	0	0.00	0	0.00
Rs.6001 - Rs.10,000	23	76.67	16	53.33
Rs.10,001 - Rs.15,000	5	16.67	12	40.00
Above Rs.15,000	2	6.67	2	6.67
<b>Family support</b>				
Yes, available	22	73.33	28	93.33
No, not available	8	26.67	2	6.67
<b>Travelling time</b>				
10 - 15 min	4	13.33	0	0.00
15 - 30 min	11	36.67	13	43.33
30 min - 1 hour	11	36.67	15	50.00
More than 1 hour	4	13.33	2	6.67
<b>Mode of travel</b>				
Walk	2	6.67	0	0.00
Two wheeler	4	13.33	13	43.33
Bus	17	56.67	17	56.67
Auto	7	23.33	0	0.00

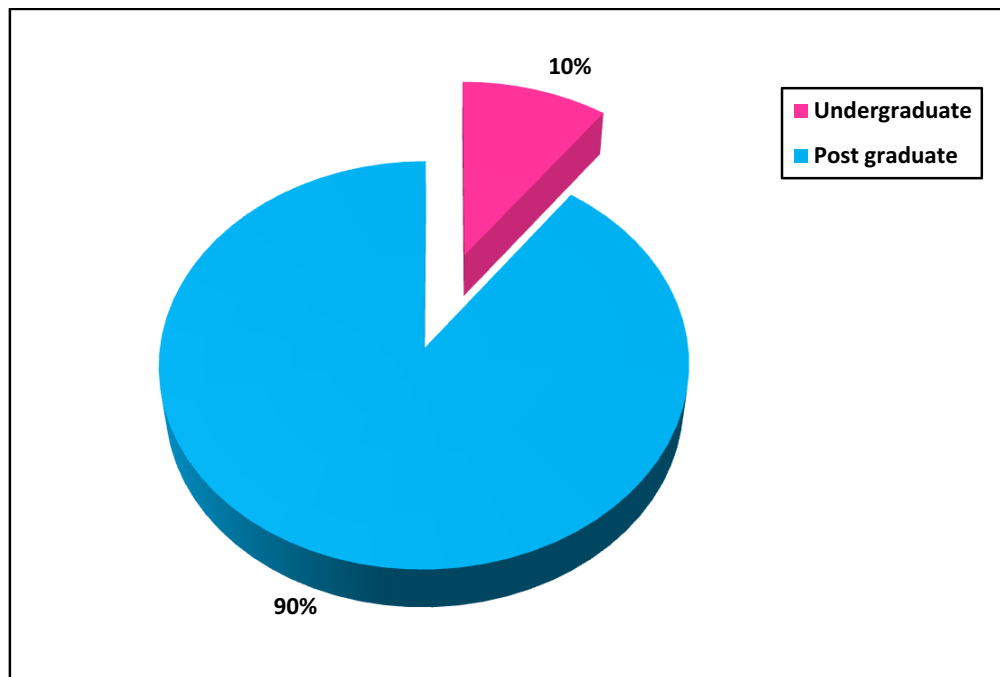
Demographic Variables	Experimental Group		Control Group	
	No.	%	No.	%
<b>Working hours</b>				
7 hours	0	0.00	0	0.00
8 hours	26	86.67	26	86.67
Above 8 hours	4	13.33	4	13.33
<b>Satisfaction in job</b>				
Fully satisfied	0	0.00	0	0.00
Moderately satisfied	25	83.33	19	63.33
Unsatisfied	5	16.67	11	36.67
<b>Total work experience (in years)</b>				
Less than 1 year	0	0.00	0	0.00
2 - 3 years	21	70.00	22	73.33
3 - 5 years	5	16.67	6	20.00
Above 5 years	4	13.33	2	6.67
<b>Type of employment</b>				
Permanent	3	10.00	2	6.67
Temporary	27	90.00	28	93.33

The table 1 shows that in the experimental group, majority 17(56.67%) were in the age group of 31 – 35 years, 25(83.33%) were female, 26(86.67%) were post graduates, 10(33.33%) major subjects were Maths, 23(76.67%) were married, 15(50%) had one child, 23(76.67%) had a monthly income of Rs.6001 – Rs.10,000, 22(73.33%) had family support, 11(36.67%) travelling time were 15 – 30 min and 30 min – 1 hour, 17(56.67%) of teachers mode of travel was bus, 26(86.67%) worked 10 hours, 25(83.33%) were moderately satisfied in the job, 21(70%) had 2 – 3 years of experience and 27(90%) were temporarily employed.

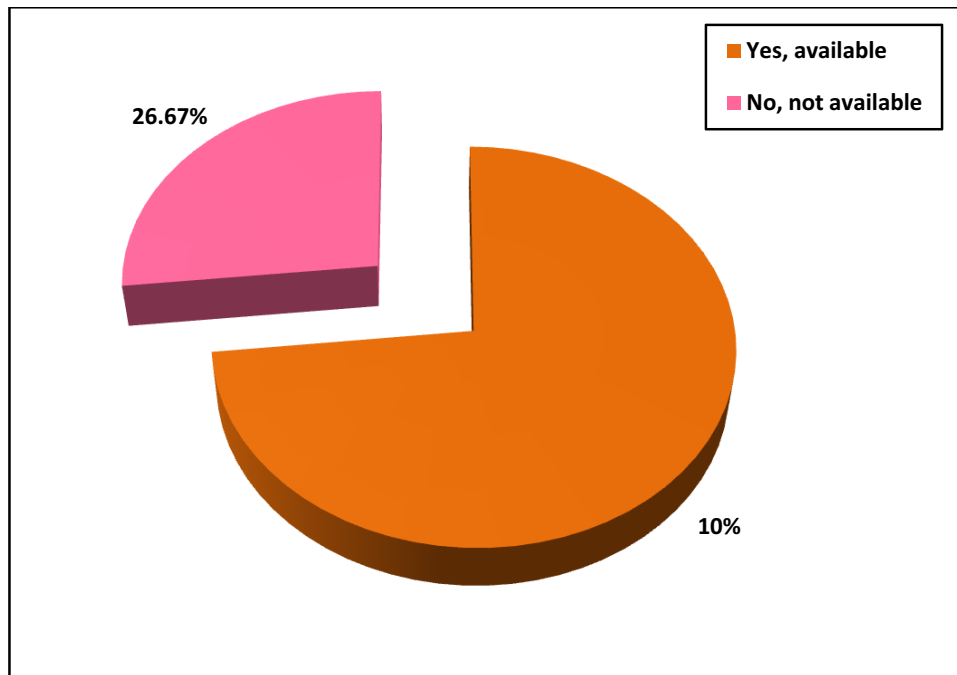
Whereas in the control group, majority 16(53.33%) were in the age group of 31 – 35 years, 24(80.3%) were female, 27(90%) were post graduates, 13(43.33%) major subjects was Maths, 25(83.33%) were married, 1(63.33%) had one child, 16(53.33%) had a monthly income of Rs.6001 – Rs.10,000, 28(93.33%) had family support, 15(507%) travelling time was 15 – 30 min and 30 min – 1 hour, 17(56.67%) of teachers mode of travel was bus, 26(86.67%) worked 10 hours, 195(63.33%) were moderately satisfied in the job, 22(73.33%) had 2 – 3 years of experience and 28(93.330%) were temporarily employed.



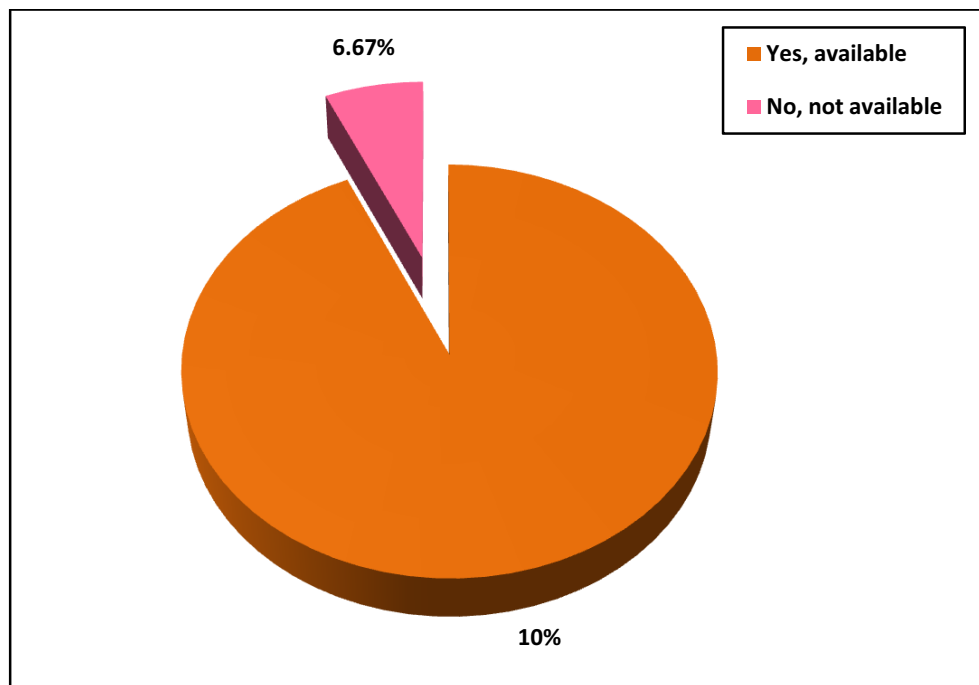
**FIGURE: 3** Percentage distribution of educational status of private higher secondary school teachers in the experimental group



**FIGURE: 4** Percentage distribution of educational status of private higher secondary school teachers in the control group



**FIGURE: 5** Percentage distribution of family support of private higher secondary school teachers in the experimental group



**FIGURE: 6** Percentage distribution of family support of private higher secondary school teachers in the control group

**SECTION B**

**ASSESSMENT OF PRETEST AND POSTTEST LEVEL OF STRESS AMONG  
PRIVATE HIGHER SECONDARY SCHOOL TEACHERS IN EXPERIMENTAL  
AND CONTROL GROUP.**

**Table 2: Frequency and percentage distribution of pretest of stress among private higher secondary school teachers in the experimental group**

**n=30**

Stress	Mild (0 – 50%)		Moderate (51 – 75%)		Severe (75 – 100%)	
	No.	%	No.	%	No.	%
Health condition	0	0	12	40.0	18	60.0
Working environment	0	0	13	43.33	17	56.67
Self perceptions	0	0	13	43.33	17	56.67
<b>Overall</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>40.0</b>	<b>18</b>	<b>60.0</b>

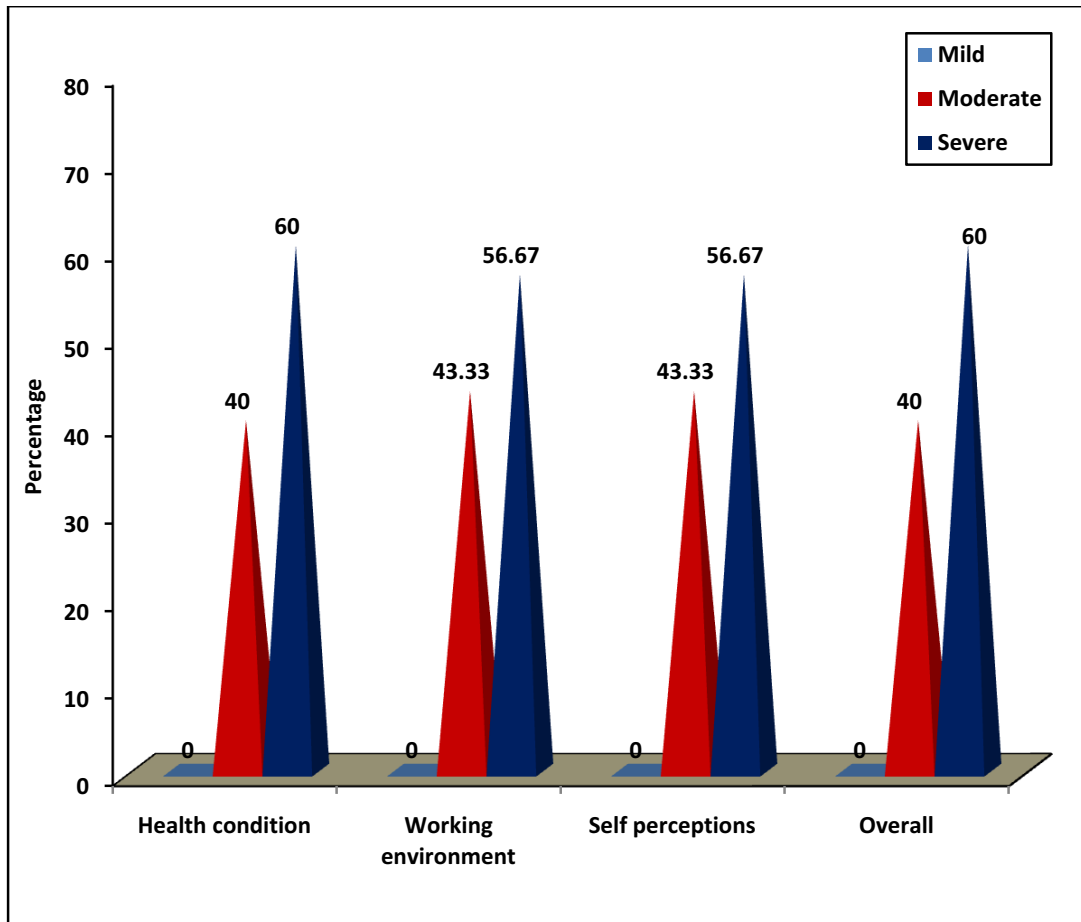
The table 2 reveals the percentage distribution of pretest level of stress among private higher secondary school teachers in the experimental group.

With respect to health condition, majority 18(60%) had severe level of stress, 12(40%) had moderate level of stress.

Regarding working environment, majority 17(56.67%) had severe level of stress and 13(43.33%) had moderate level of stress.

With regard to self perception, majority 17(56.67%) had severe level of stress and 13(43.33%) had moderate level of stress.

The overall of pretest level of stress in experimental group, revealed that majority 18(60%) had high level of stress and 12(40%) had moderate level of stress.



**FIGURE: 7** Percentage distribution of pretest level of stress among private higher secondary school teachers in the experimental group



**Table 3: Frequency and percentage distribution of post test level of stress among private higher secondary school teachers in the experimental group**

**n=30**

Stress	Mild (0 – 50%)		Moderate (51 – 75%)		Severe (75 – 100%)	
	No.	%	No.	%	No.	%
Health condition	9	30.0	21	70.0	0	0
Working environment	9	30.0	21	70.0	0	0
Self perceptions	12	40.0	18	60.0	0	0
<b>Overall</b>	<b>12</b>	<b>40.0</b>	<b>18</b>	<b>60.0</b>	<b>0</b>	<b>0</b>

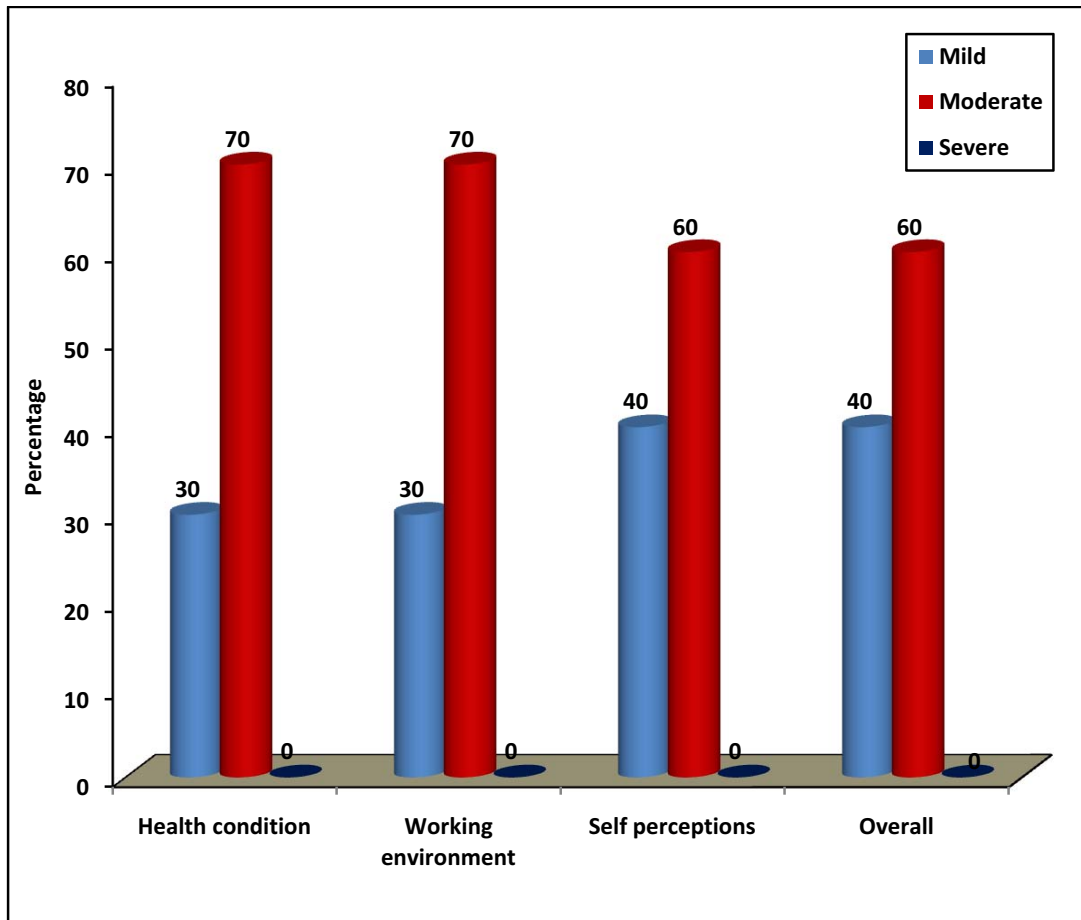
The table 3 reveals the percentage distribution of post test level of stress among private higher secondary school teachers in the experimental group.

With respect to health condition, majority 21(70%) had moderate level of stress, 9(30%) had mild level of stress.

Regarding working environment, majority 21(70%) had moderate level of stress, 9(30%) had mild level of stress.

With regard to self perception, majority 18(60%) had moderate level of stress and 12(40%) had mild level of stress.

The overall post test level of stress in experimental group, revealed that 18(60%) had moderate level of stress and 12(40%) had mild level of stress.



**FIGURE: 8** Percentage distribution of post test level of stress among private higher secondary school teachers in the experimental group

**Table 4: Frequency and percentage distribution of pretest level of stress among private higher secondary school teachers in the control group**

**n=30**

Stress	Mild (0 – 50%)		Moderate (51 – 75%)		Severe (75 – 100%)	
	No.	%	No.	%	No.	%
Health condition	0	0	12	40.0	18	60.0
Working environment	0	0	13	43.33	17	56.67
Self perceptions	0	0	13	43.33	17	56.67
<b>Overall</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>40.0</b>	<b>18</b>	<b>60.0</b>

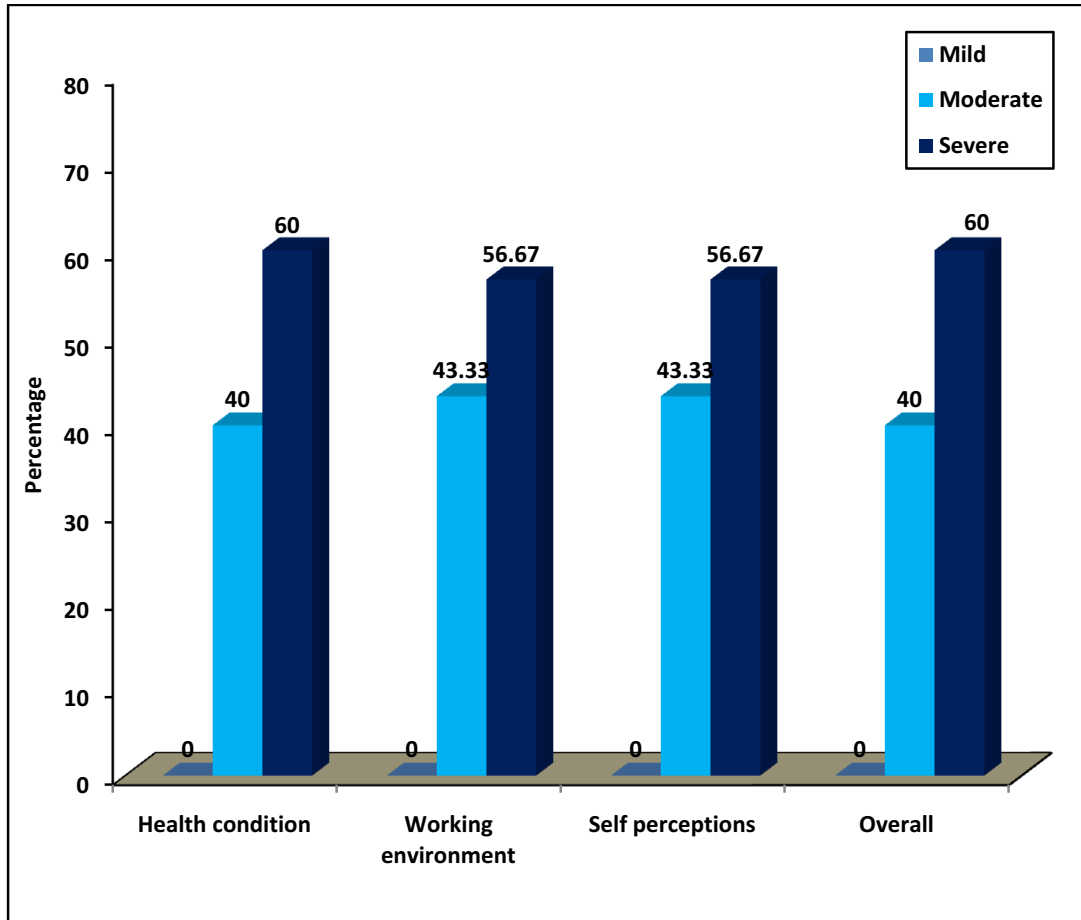
The table 4 reveals the percentage distribution of pretest level of stress among private higher secondary school teachers in the control group.

With regard to health condition, majority 18(60%) had severe level of stress, 12(40%) had moderate level of stress.

Considering the working environment, majority 17(56.67%) had severe level of stress and 13(43.33%) had moderate level of stress.

With respect to self perception, majority 17(56.67%) had severe level of stress and 13(43.33%) had moderate level of stress.

The overall of pretest level of stress in control group, revealed that majority 18(60%) had severe level of stress and 12(40%) had moderate level of stress.



**FIGURE: 9** Percentage distribution of pretest level of stress among private higher secondary school teachers in the control group

**Table 5: Frequency and percentage distribution of post test level of stress among private higher secondary school teachers in the control group**

<b>n=30</b>						
<b>Stress</b>	<b>Mild</b>		<b>Moderate</b>		<b>Severe</b>	
	<b>(0 – 50%)</b>		<b>(51 – 75%)</b>		<b>(75 – 100%)</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
Health condition	0	0	12	40.0	18	60.0
Working environment	0	0	13	43.33	17	56.67
Self perceptions	0	0	13	43.33	17	56.67
<b>Overall</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>40.0</b>	<b>18</b>	<b>60.0</b>

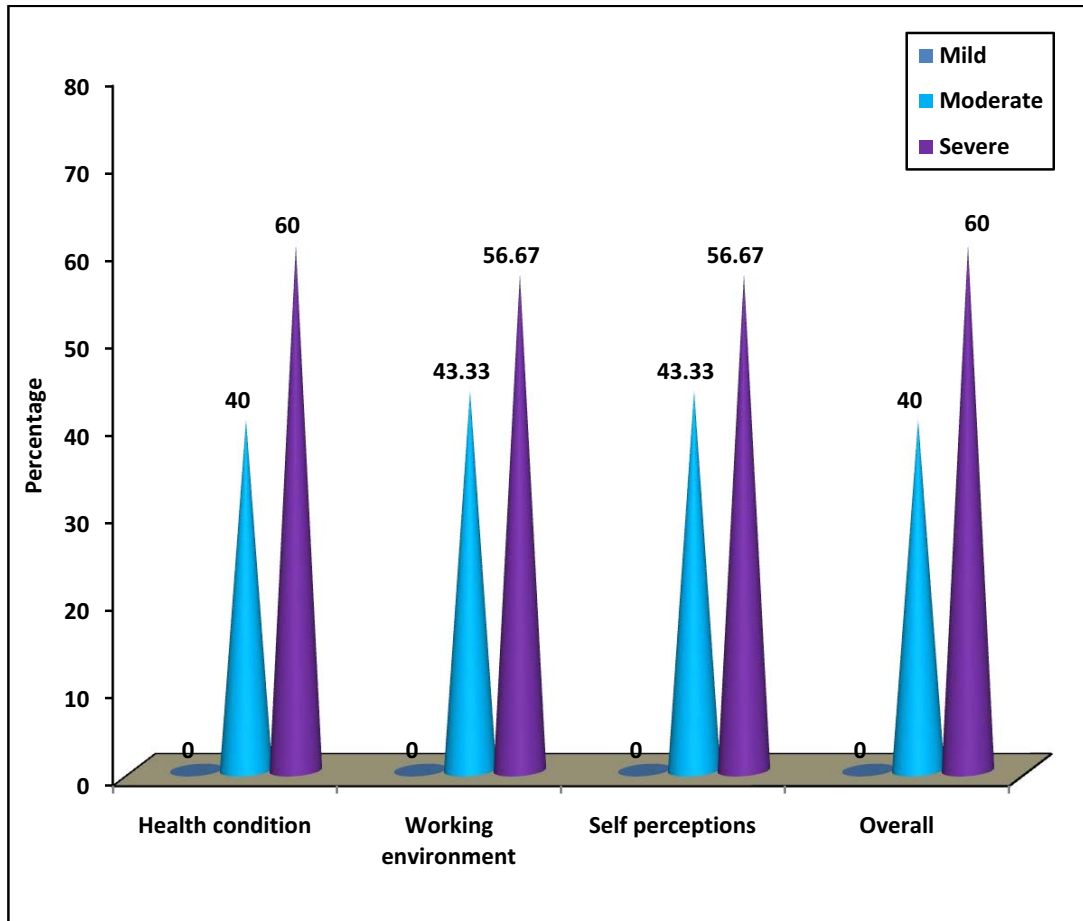
The table 5 reveals the percentage distribution of post test level of stress among private higher secondary school teachers in the control group.

With regard to health condition, majority 18(60%) had severe level of stress, 12(40%) had moderate level of stress.

Considering the working environment, majority 17(56.67%) had severe level of stress and 13(43.33%) had moderate level of stress.

With respect to self perception, majority 17(56.67%) had severe level of stress and 13(43.33%) had moderate level of stress.

The overall of post test level of stress in control group, revealed that majority 18(60%) had high level of stress and 12(40%) had moderate level of stress.



**FIGURE: 10** Percentage distribution of post test level of stress among private higher secondary school teachers in the control group

### SECTION C

#### EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON THE LEVEL OF STRESS AMONG PRIVATE HIGHER SECONDARY SCHOOL TEACHERS IN EXPERIMENTAL AND CONTROL GROUP.

**Table 6: Comparison of pre and post test level of stress among private higher secondary school teachers in experimental group.**

**n=30**

<b>Stress</b>	<b>Mean</b>	<b>S.D</b>	<b>Paired 't' Value</b>
Pretest	97.63	6.75	$t = 72.511^{***}$
Post Test	58.00	5.10	$p = 0.000, S$

\*\*\* $p < 0.001$ , S – Significant

The table 6 shows the comparison of pre and post test level of stress in experimental group.

The pretest mean value of stress was 97.63 with S.D 6.75 and the post test mean value of stress was 58.0 with S.D 5.10.

The calculated paired 't' value of  $t = 72.511$  was found to be statistically significant at  $p < 0.001$  level.

This clearly shows that the administration of progressive muscle relaxation technique on stress had significant reduction in the post test level of stress among private higher secondary school teachers in experimental group. This clearly indicates that progressive muscle relaxation technique on stress was effective in reducing the stress level of school teachers.

**Table 7: Comparison of pre and post test level of stress among private higher secondary school teachers in control group.**

<b>n=30</b>			
<b>Stress</b>	<b>Mean</b>	<b>S.D</b>	<b>Paired 't' Value</b>
Pretest	97.63	6.75	t = 1.989
Post Test	97.43	6.64	p = 0.056, N.S
N.S – Not Significant			

The table 7 shows the comparison of pre and post test level of stress in control group.

The pretest mean value of stress was 97.63 with S.D 6.75 and the post test mean value of stress was 97.43 with S.D 6.64.

The calculated paired 't' value of  $t = 1.989$  was not found to be statistically significant.

This clearly shows that there was no significant difference between the pretest and post test stress score among private higher secondary school teachers in the control group.



**Table 8: Comparison of post test stress score among private higher secondary school teachers between the experimental and control group.**

N=60(30+30)			
Post Test	Mean	S.D	Unpaired 't' Value
Experimental	59.0	5.10	t = 25.115
Control	97.43	6.64	p = 0.000, S***

\*\*\*p<0.001, S – Significant

Table 8 shows the comparison of post test stress score between the experimental and control group.

When comparing the post test stress score between the experimental and control group, the post test mean score in the experimental group was 58.0 with S.D 5.10 and the post test mean score in the control group was 97.43 with S.D 6.64. The calculated unpaired 't' value of  $t = 25.115$  was found to be statistically significant at  $p < 0.001$  level.

This clearly indicates that after the administration of progressive muscle relaxation technique on stress to private higher secondary school teachers in the experimental group there was a significant reduction in the post test level of stress score in the experimental group. Thus the progressive muscle relaxation technique was found to be effective in reducing the stress in the post test among private higher secondary school teachers in the experimental group than the private higher secondary school teachers in the control group.

## SECTION D

**ASSOCIATION OF POSTTEST LEVEL OF STRESS AMONG PRIVATE HIGHER SECONDARY SCHOOL TEACHERS WITH THEIR SELECTED DEMOGRAPHIC VARIABLES IN THE EXPERIMENTAL GROUP.**

**Table 9: Associations of post test level of stress among private higher secondary school teachers with their selected demographic variables in experimental group.**

**n=30**

Demographic Variables	Mild (30 – 60)		Moderate (61 – 90)		Chi-Square Value
	No.	%	No.	%	
<b>Age in years</b>					$\chi^2 = 2.746$
21 - 25 years	-	-	-	-	d.f = 2
26 - 30 years	2	6.7	7	23.3	p = 0.253
31 - 35 years	9	30.0	8	26.7	N.S
36 - 40 years	1	3.3	3	10.0	
<b>Sex</b>					$\chi^2 = 1.000$
Male	3	10.0	2	6.7	d.f = 1
	9	30.0	16	53.3	p = 0.317
Female					N.S
<b>Educational status</b>					$\chi^2 = 4.000$
Undergraduate	0	0	5	16.7	d.f = 1
	12	40.0	13	43.3	p = 0.046
Post graduate					S*
<b>Major subjects</b>					
Tamil	3	10.0	2	6.7	
English	5	16.7	5	16.7	$\chi^2 = 9.722$
Maths	1	3.3	2	6.7	d.f = 7
Physics	0	0	3	10.0	p = 0.205
Chemistry	0	0	3	10.0	N.S
Biology	2	6.7	0	0	
Computer science	0	0	2	6.7	

Demographic Variables	Mild (30 – 60)		Moderate (61 – 90)		Chi-Square Value
	No.	%	No.	%	
Accountancy	1	3.3	1	3.3	
Commerce	-	-	-	-	
Economics	-	-	-	-	
<b>Marital status</b>					$\chi^2 = 3.309$
Married	11	36.7	12	40.0	d.f = 2
Unmarried	0	0	4	13.3	p = 0.191
Widow	1	3.3	2	6.7	N.S
Divorced/Separated	-	-	-	-	
<b>Number of children</b>					$\chi^2 = 2.500$
No child	0	0	3	10.0	d.f = 3
One child	6	20.0	9	30.0	p = 0.475
Two child	5	16.7	5	16.7	N.S
Above two child	1	3.3	1	3.3	
<b>Monthly income</b>					$\chi^2 = 1.449$
Less than Rs.6000	-	-	-	-	d.f = 2
Rs.6001 - Rs.10,000	10	33.3	13	43.3	p = 0.485
Rs.10,001 - Rs.15,000	2	6.7	3	10.0	N.S
Above Rs.15,000	0	0	2	6.7	
<b>Family support</b>					$\chi^2 = 6.087$
Yes, available	12	40.0	11	36.7	d.f = 1
	0	0	7	23.3	p = 0.014
No, not available					S*
<b>Travelling time</b>					$\chi^2 = 3.485$
10 - 15 min	2	6.7	2	6.7	d.f = 3
15 - 30 min	6	20.0	5	16.7	p = 0.323
30 min - 1 hour	2	6.7	9	30.0	N.S
More than 1 hour	2	6.7	2	6.7	

Demographic Variables	Mild (30 – 60)		Moderate (61 – 90)		Chi-Square Value
	No.	%	No.	%	
<b>Mode of travel</b>					
Walk	1	3.3	1	3.3	$\chi^2 = 1.192$
Two wheeler	1	3.3	3	10.0	d.f = 3
Bus	8	26.7	9	30.0	p = 0.755
Auto	2	6.7	5	16.7	N.S
<b>Working hours</b>					
					$\chi^2 = 3.077$
8 hours	-	-	-	-	d.f = 1
10 hours	12	40.0	14	46.7	p = 0.079
Above 10 hours	0	0	4	13.3	N.S
<b>Satisfaction in job</b>					
					$\chi^2 = 1.000$
Fully satisfied	-	-	-	-	d.f = 1
Moderately satisfied	11	36.7	14	46.7	p = 0.317
Unsatisfied	1	3.3	4	13.3	N.S
<b>Total work experience (in years)</b>					
					$\chi^2 = 1.716$
Less than 1 year	-	-	-	-	d.f = 2
2 - 3 years	10	33.3	11	36.7	p = 0.424
3 - 5 years	1	3.3	4	13.3	N.S
Above 5 years	1	3.3	3	10.0	
<b>Type of employment</b>					
					$\chi^2 = 0.062$
Permanent	1	3.3	2	6.7	d.f = 1
	11	36.7	16	53.3	p = 0.804
Temporary					N.S

\*\*\*p< 0.001, \*p<0.05, S – Significant, N.S – Not Significant

The table 9 shows that the demographic variables educational status and family support had shown statistically significant association with post test level of stress at p<0.05 level among private higher secondary school teacher sin the experimental group and the other demographic variables had not shown statistically significant association with the post test level of stress among private higher secondary school teachers in the experimental group.

## **CHAPTER – V**

### **DISCUSSION**

Stress is an everyday fact of life. It has physical, emotional and behavioral effects on us and can create positive or negative feelings. Stress is believed to be caused mostly by external events, stress occurs when the pressure is greater than there sources available. 50 to 75 per cent of today's disease related to stress and stress within organization is the second most frequent trouble and affects as many as 28 per cent of employees. Stress has become an vital part of life. It plays a major role in successfulness and unsuccessfulness of a work activity. Stress is not always negative. An optimal amount of stress is essential to generate enthusiasm, creativity, and productivity. However excessive level of stress could become counterproductive. This will result in decrease the higher levels of productivity.

The aim of the present study was to evaluate the effectiveness of progressive muscle relaxation technique in reducing stress among private higher secondary school teachers at Pudukkottai. The study was conducted by quantitative research approach and Quasi experimental design, Non randomized control group [pre test post test control group] design. The teachers working in selected school between 21- 40 years was selected for the study. The sample size was 60 [30 experimental group and 30 control group] and was selected by non probability purposive sampling technique. NIOSH [ NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH] Modified generic job stress scale was used to assess the stress level.

The first objective of the study was to assess the pretest level of stress among private higher secondary school teachers before demonstrating progressive muscle relaxation technique in experimental group and control group. The level of stress was assessed through modified NIOSH generic job stress scale.

The investigator concluded that the experimental group school teachers had experienced 12(40%) had moderate level of stress, 18(60%) had severe level of stress. In control group the school teachers had experienced 12(40%) had moderate level of stress, 18(60%) had severe level of stress.

These findings were supported a study done by Dr.G.Lokanadha Reddy and Dr.R.Vijaya anuradha(2013) who stated that teachers of experimental group had moderate and severe level of stress, the control group of school teachers had severe level of stress, it was found that 249 (76.1%) teachers are experiencing moderate level of stress, followed by 42 (12.8%) teachers with high stress and 36 (11.0%) teachers with moderate stress.

The investigator found that difference in pre test and post test experimental group school teachers. The stated hypotheses I was accepted.

The second objective of this study was to assess the post test level of stress among private higher secondary school teachers after demonstrating progressive muscle relaxation technique in experimental and control group.

The investigator found that the experimental group school teachers had experienced 12(40%) had mild stress and 18(60%) had moderate level of stress. In control group the school teachers had experienced 12(40%) had moderate level of stress, 18(60%) had severe level of stress.

These findings were supported a study done by Sirous Sarvghad(2014) who stated that progressive muscle relaxation technique helps to reduce the level of stress among private higher secondary school teachers in experimental group, there is a significant difference between nurses in control and experiment group. ( $p < 0.0001$  and  $F = 123.17$ ) the rating of difference of effectiveness is 0.90, i.e. 90 percent of personal differences in scores of post-test (occupational stress and working life quality) is the

effect of applying progressive muscle relaxation technique. Moreover it was shown in table 3 that with a control pre-test between nurses of experiment group and control group regarding occupational stress ( $F=120.94$  and  $p<0.0001$ ) and quality of working life ( $F=115/93$ ,  $p<0.0001$ ) a significant difference exists.

The investigator found that control group school teachers did not practice the progressive muscle relaxation technique. The stated hypotheses II was accepted.

.The third objective of the study was to evaluate the effectiveness of progressive muscle relaxation technique among private higher secondary school teachers in experimental group.

The pre test mean score was 97.63 with S.D 6.75 and the post test mean score of stress was 58.0 with S.D 5.10., the calculated paired “t” test values of  $t=72.511$  was found to be statistically significant at  $p<0.001$  level. This clearly indicated that the progressive muscle relaxation technique was demonstrated to the private higher secondary school teachers in the experimental group resulted in the considerably reduce the level of stress in the post test.

The pre test mean score was 97.63 with S.D 6.75 and the post test mean score of stress was 97.43 with S.D 6.64., the calculated paired “t” test values of  $t=1.989$  was not found to be statistically significant at  $p<0.001$  level. There is no change in the level of stress among private higher secondary school teachers in the control group.

Comparison of post test stress score among private higher secondary school teachers between the experimental and control group. The post test mean score of stress in the experimental group was 59.0 with S.D 5.10 and in the control group the post test mean score of stress was 97.43 with S.D 6.64. The calculated unpaired “t” test value of  $t=25.115$  was found to be statistically significant at  $p<0.001$  level. The progressive muscle relaxation technique administered to the private higher secondary

school teachers in the experimental group had significant effect in the post test level of stress than the control group.

These findings were supported a study done by Ms.P.Antony Jebamali Packiam (2011) The findings of the study mean score of stress in post test was significantly lower than the pre test score 't' test value was highly significant at 0.05 level and t value 26.55 and  $r=0.7874$ . The progressive muscle relaxation was effective in reducing stress among school teachers.

The fourth objective of this study was to find out the association between the post test level of stress among private higher secondary school teachers with their selected demographic variables in experimental group.

The chi square value showed significance association between the progressive muscle relaxation technique to stress. Demographic variables educational status and family support had shown significance association with the post test level of stress among private higher secondary school teachers at  $p<0.05$  level. The other demographic variables had not shown statistically significance association with the post test level of stress among private higher secondary school teachers in the experimental group. The stated hypotheses III was accepted.

These findings was supported a study done by Dr.S.Jeyaraj (2013) who stated that the demographic variables reason for educational status had significance association with the post test level of stress among private higher secondary school teachers in experimental group. Chi-square test has been applied, the result is 10.53 and table value at 5 per cent level of significance is 9.488 in degrees of freedom 4. As the calculated chi-square value is more than the table value



## **CHAPTER - VI**

### **SUMMARY, CONCUSION, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS**

This chapter presents the summary of the study and conclusions drawn. It classifies limitation of the study, implications, recommendation in different areas like nursing practice, nursing education, nursing administration, nursing research and recommendation for the further study.

#### **SUMMARY OF THE STUDY**

"A Quasi Experimental study to evaluate the effectiveness of progressive muscle relaxation technique on stress among school teachers in selected private higher secondary schools at Pudukkottai during the year 2015"

#### **THE FOLLOWING OBJECTIVES WERE SET FOR THE STUDY**

To assess the pre test level of stress among private higher secondary school teachers before demonstrating progressive muscle relaxation technique in experimental group and control group.

To assess the post test level of stress among private higher secondary school teachers after demonstrating progressive muscle relaxation technique in experimental and control group.

To evaluate the effectiveness of progressive muscle relaxation technique among private higher secondary school teachers in experimental group.

To find out the association between the post test level of stress among private higher secondary school teachers with their selected demographic variables in experimental group

## **HYPOTHESES**

H1 - There was a significant difference between the pre test and post test level of stress among private higher secondary school teachers in experimental group.

H2 - There was a significant difference between the post test level of stress among private higher secondary school teachers between experimental and control group.

H3 - There was a significant association between the post test level of stress with their selected demographic variables among private higher secondary school teachers in experimental group.

The conceptual model of the study was based on the Kenny's open system model. The study was conducted with Non randomized control group [pre test post test control group] design. Non probability purposive sampling technique was used to select the study sample. The instrument's used for data collection were modified NIOSH [National Institute for Occupational and Safety Health] generic job stress scale.

The data analyzed and interpreted in terms of objectives and research hypothesis. Descriptive statistics [ Frequency, Percentage, Mean and Standard Deviation] and inferential statistics [ "t" test, chi square] were used to test the research hypotheses.

## **MAJOR FINDINGS OF THE STUDY**

1. In the experimental group, the majority 17(56.67%) were in the age of 31 -35 years, 9(30.00%) were in the age group of 26 – 30 years, 4(13.33%) were in the age of 36 -40 years: sex, the majority 25(83.33%) were female, 5 (16.67%) were male, educational status, the majority 26(86.67%) were post graduate, 4(13.33%) were under graduate, major subjects the majority 10(33.33%) were maths,

5(16.67) were physics, 3(10%) were economics, 3(10%) were commerce, 3(10%) were chemistry, 2(6.67%) were biology, 2(6.67%) were computer science, 2(6.67%) were accountancy; marital status, the majority 23(76.67%) were married, 4 (13.33%) were unmarried, 3(10%) were widow; number of children 15(50%) were one child, 10(33.33%) had two child, 3 (10%) had no child, 2 (6.67%) had above child; monthly income majority 23(76.67%) were Rs. 6000 – Rs. 10,000, 5 (16.67%) were Rs. 10,001 – Rs.15,000, 2(6.67%) were Rs. 15,000 and above; family support, the majority 22(73.33%) had family support, 8(26.67%) not having family support; travelling time, the majority 11(36.67%) were travelled for 15 -30 minutes, 11(36.67%) were travelled for 30 minutes – 1 hour, 4(13.33%) were travelled for more than one hour, 4 (13.33%) were travelled for 10 – 15 minutes; mode of travel, the majority 17(56.67%) were bus, 4(13.33%) were two wheeler, 7(23.33%) were auto; working hours; 26(86.67%) were 8 hours, 4 (13.33%) were working above 8 hours; satisfaction in job the majority 25(83.33%) were moderately satisfied, 5(16.67%) were unsatisfied; total work experience, the majority 21(70%) had experienced 2 – 3 years, 5(16.67%) had experienced 3 – 5 years, 4 (13.33%) had experienced above 5 years; type of employment, the majority 27(90%) were temporarily working, 3(10%) were permanently working.

2. In the control group, the majority 16(53.33%) were in the age of 26 -35 years, 11(36.67%) were in the age group of 31 – 35 years, 3(10%) were in the age of 36 -40 years: sex, the majority 24(80.00%) were female, 6 (20.00%) were male, educational status, the majority 27(90%) were post graduate, 3(10%) were under graduate, major subjects the majority 13(43.33%) were maths, 6(20%) were physics, 1(3.33%) were economics, 1(3.33%) were commerce, 1(3.33%) were chemistry, 2(6.67%) were biology, 2(6.67%) were computer science, 2(6.67%) were accountancy; marital status, the majority 25(83.33%) were married, 2

(6.67%) were unmarried, 3(10%) were widow; number of children 19(63.33%) were one child, 7(23.33%) had two child, 2 (6.67%) had no child, 2 (6.67%) had above child; monthly income majority 16(76.67%) were Rs. 6000 – Rs. 10,000, 12 (40.00%) were Rs. 10,001 – Rs.15,000, 2(6.67%) were Rs. 15,000 and above; family support, the majority 28(93.33%) had family support, 2(6.67%) not having family support; travelling time, the majority 13(43.33%) were travelled for 15 -30 minutes, 15(50%) were travelled for 30 minutes – 1 hour, 2(6.67%) were travelled for more than one hour; mode of travel, the majority 17(56.67%) were bus, 13(43.33%) were two wheeler; working hours, the majority 26(86.67%) were 8 hours, 4 (13.33%) were working above 8 hours; satisfaction in job the majority 19(63.33%) were moderately satisfied, 11(36.67%) were unsatisfied; total work experience, the majority 22(73.33%) had experienced 2 – 3 years, 6(20%) had experienced 3 – 5 years, 2 (6.67%) had experienced above 5 years; type of employment, the majority 28(93.33%) were temporarily working, 2(6.67%) were permanently working.

3. The overall pre test level of stress shows the majority 18 (60%) had severe level of stress and 12(40%) had moderate level of stress in the experimental group. The overall post test level of stress shows that the majority 18(60%) had mild level of stress and 12(40%) had moderate level of stress in the experimental group.
4. The overall pre test and post test level of stress shows that 12(40%) had moderate level of stress and 18(60%) had severe level of stress in control group.
5. In the experimental group, the pre test score of stress was 97.63 with S.D 6.75 and the post test mean score of stress was 58.00 with S.D 5.10. The calculated paired “t” test value of  $t = 72.511$  was found to be statistically significant at  $p < 0.001$  level. It indicates that the progressive muscle relaxation technique administered to

the private higher secondary school teachers in the experimental group resulted in considerable change in the level of stress in the post test.

6. The pre test mean score of stress was 97.63 with S.D 6.75 and the post test mean score of stress was 97.43 with S.D 6.64. The calculated paired “t” test value of  $t = 1.989$  was not found to be statistically significance. This clearly indicated that there was no change in the level of stress among private higher secondary school teachers in the control group.
7. The experimental group post test mean score of stress was 58.00 with S.D 5.10 and the control group post test mean score of stress was 97.43 with S.D 6.64. The calculated paired “t” test value of  $t = 25.115$  was found to be statistically significance at  $p < 0.001$ . This clearly indicates that the progressive muscle relaxation technique administered to the private higher secondary school teachers in experimental group had significant effect in the post test level of stress than the control group.
8. The demographic variables educational status and family support had shown statistically significance association with the post test level of stress among private higher secondary school teachers at  $p < 0.05$  level. The other demographic variables had not shown significant association with the post test level of stress among private higher secondary school teachers in the experimental group.

## **CONCLUSION**

1. Progressive muscle relaxation techniques are safer and more effective intervention on the time of stress.
2. The progressive muscle relaxation technique helps to relieve stress and to promote well being of the persons.
3. The experimental group of private higher secondary school teachers were experienced more benefit at the time of stress.

## **IMPLICATIONS OF THE STUDY**

It includes implication for nursing practice, nursing education, nursing administration and nursing research.

## **NURSING PRACTICE**

The assessment on level of stress will help the occupational health nurse to provide progressive muscle relaxation technique

The present study will enable nurses to use progressive muscle relaxation technique to protect patients from the effects of stress.

Nurses can also use this complementary technique of progressive muscle relaxation as a primary prevention of stress and related complications.

## **NURSING EDUCATION**

Student nurses can learn themselves and practice this progressive muscle relaxation technique to avoid stress.

Student nurses can conduct progressive muscle relaxation technique in clinical area during their clinical experience.

The faculty members can motivates the students to practice progressive muscle relaxation technique sessions and educate them regarding the importance and health benefits of progressive muscle relaxation technique.

## **NURSING ADMINISTRATION**

Administrators should motivate the public to joint progressive muscle relaxation technique and benefit from them.

Administrators in both local, state and central government can take necessary steps to publish articles in the journal explaining the importance and benefits of progressive muscle relaxation technique.

## **NURSING RESEARCH**

More research can be conducted among old age people with anxiety to demonstrate the effects of progressive muscle relaxation technique.

## **LIMITATIONS**

The study was limited to evaluate the effectiveness of progressive muscle relaxation technique only on stress among teachers.

The study was limited to the time allotted for progressive muscle relaxation technique sessions (30 minutes/ day).

## **RECOMMENDATIONS**

Based on the findings the present study recommendations are offered for further research.

- A true experimental study can be conducted to evaluate the effectiveness of progressive muscle relaxation technique on stress among school teachers.
- A large scale study needs to be carried out generalize the findings.
- A similar study can be conducted by using other relaxation techniques like music therapy, yoga, meditation and laughter therapy to reduce the stress.
- A similar study can be conducted for any other difficult population.
- A comparative study can be conducted to evaluate the effectiveness of progressive muscle relaxation technique on stress among government and private school teachers.

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**APPENDIX – A**  
**SECTION - I**  
**DEMOGRAPHIC DATA**

1. Age in years
  - a. 21 –25years
  - b. 26– 30 years
  - c. 31 – 35 years
  - d. 36 – 40 years
2. Sex
  - a. Male
  - b. Female
3. Educational status
  - a. Under graduate
  - b. Post graduate
4. Major Subjects
  - a. Tamil
  - b. English
  - c. maths
  - d. physics
  - e. chemistry
  - f. biology
  - g. computer science
  - h. accountancy
  - i. commerce
  - j. economics
5. Marital status
  - a. married
  - b. Un married
  - c. Widow
  - d. divorced /separated

6. Number of children

- a. No child
- b. one child
- c. two child
- d. above two child

7. Monthly income

- a. less than Rs. 6000
- b. Rs. 6001 - Rs. 10,000
- c. Rs. 10,001 - Rs. 15,000
- d. above Rs. 15,000

8. Family support

- a. yes , available
- b. no, not available

9. Travelling time

- a. 10 – 15 min
- b. 15 – 30 min
- c. 30 min – 1 hour
- d. more than 1 hour

10. Mode of travel

- a. walk
- b. two wheeler
- c. bus
- d. auto

11. Working hours

- a. 8 hours
- b. 10 hours
- c. above 10 hours

12. Satisfaction in job

- a. fully satisfied
- b. moderately satisfied
- c. unsatisfied

13. Total work experience (in years)

- a. Less than 1 year
- b. 2 – 3 years
- c. 3 – 5 years
- d. Above 5 years

14. Type of Employment

- a. Permanent
- b. temporary

## SECTION II

### NIOSH MODIFIED GENERIC JOB STRESS SCALE

Here are 30 questions that will help to assess your stress level. Each questions has four responses. please put a tick mark against the column of your choice.

**SCORE: 1. NEVER, 2. SOMETIMES, 3. FAIRLY OFTEN, 4. ALWAYS**

S. No	CONTENT	1	2	3	4
<b>I. HEALTH CONDITION</b>					
1	I am having loss of appetite				
2	My illness affected to my work				
3	I have crying spells				
4	I feel sad				
5	I have difficulty in concentration				
6	I am having complaints of ulcer				
7	I have trouble in sleeping at night				
8	I am having complaints of indigestion				
9	My muscles ever felt tight and tense				
10	I have spells of dizziness				
11	I am having head ache				
12	I am having complaints of palpitation and rapid pulse				



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## **II. WORKING ENVIRONMENT**

- 13 I am having complaints of frequent absenteeism
- 14 I am avoiding my responsibilities
- 15 I am satisfying with my job
- 16 I feel that I have over burden
- 17 I am having problem with my boss or co –worker
- 18 I face problem in decision making
- 19 I have good relationship with my colleagues

## **III. SELF PERCEPTIONS**

- 20 I feel that I do not have a number of good qualities
  - 21 I have insufficient knowledge about subject that I handle
  - 22 I have recurrent thought about bad experience
  - 23 I have keeps on trouble in doing work
  - 24 I feel difficulty to control the students while taking class
-

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25 I feel that I don't have hopeful about  
my future

26 I feel fearful

27 I feel lonely

28 I feel that people dislike me

29 I have loss of interest in doing work

30 I feel depressed

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## Appendix – A

### Section – I

சமுதாய நலக் காரணிகள்

1. வயது

அ. 21 – 25 வயது வரை

ஆ. 26 – 30 வயது வரை

இ. 31 – 35 வயது வரை

ஈ. 36 – 40 வயது வரை

2. பாலினம்

அ. ஆண்

ஆ. பெண்

3. கல்வித்தகுதி

அ. இளங்கலை பட்டப்படிப்பு

ஆ. முதுகலை பட்டப்படிப்பு

4. பாடப்பகுதி

அ. கணிதம்

ஆ. இயற்பியல்

இ. வேதியியல்

ஈ. உயிரியியல்

ய. கணினி

ஊ. கணக்குபதிவியல்

எ. வணிகவியல்

ஏ. பொருளியல்

5. திருமணம்

அ. திருமணம் ஆனவர்

ஆ. திருமணம் ஆகாதவர்

இ. கைம்பெண்

ஈ. பிரிந்து வாழ்பவர்

6. குழந்தைகளின் எண்ணிக்கை

அ. இல்லை

ஆ. ஒன்று

இ. இரண்டு

ஈ. இரண்டிற்கு மேல்

7. மாதவருமானம்

அ. ரூ.6000த்திற்குள்

ஆ. ரூ.6001 - ரூ.10000 வரை

இ. ரூ.10001 - ரூ.15000 வரை

ஈ. ரூ.15000 த்திற்கு மேல்

8. உங்களுக்கு குடும்பத்தின் மூலம் ஒத்துழைப்பு கிடைக்கிறதா?

அ. ஆம்

ஆ. இல்லை

9. பயணம் செய்யும் நேரம்

அ. 10 – 15 நிமிடங்கள்

அ. 15 – 30 நிமிடங்கள்

இ. 30 நிமிடம் - 1 மணி நேரம்

ஈ. 1 மணி நேரத்திற்கு மேல்

10. பயணம் செய்யும் முறை

அ. நடைபயணம்

ஆ. இருசக்கர வாகனம்

ஆ. பேருந்து

இ. மூன்று சக்கர வாகனம்

11.வேலை பார்க்கும் நேரம்

அ. 7 மணி நேரம்

ஆ. 8 மணிநேரம்

இ. 8 மணிநேரத்திற்கு மேல்

12.வேலை பார்க்கும் சூழ்நிலை

அ. திருப்தி அளிக்கின்றது

ஆ. ஓரளவு திருப்தியாக உள்ளது

இ. திருப்தி அளிக்கவில்லை

13.வேலை அனுபவம்

அ. ஒருவருடத்திற்குள்

ஆ. இரண்டு முதல் மூன்றுவருடம்

இ. மூன்று முதல் ஐந்து வருடம்

ஈ. ஐந்து வருடத்திற்கு மேல்

14.பணி நியமனம்

அ. தற்காலிகம்

ஆ. நிரந்தரம்

## Section - II

NIOSH – மாற்றியமைக்கப்பட்ட பணி மன அழுத்தத்திற்கான அளவு  
கோல்

கீழே கொடுக்கப்பட்டுள்ள 30 கேள்விகள் மூலம் உங்களின் மன அழுத்தத்தை அறிய முடியும். இதில் நான்கு கட்டங்கள் உள்ளன. அதில் உங்களுக்கு பொருத்தமான கட்டத்தில் (✓) குறியீடு செய்யவும்.

1. இல்லை 2. அவ்வப்போது 3. ஏறத்தாழ எப்பொழுதும் 4. எப்போதும்

வ. எண்	பொருளடக்கம்	1	2	3	4
	I.உடல் ஆரோக்கியம்				
1.	பசியின்மை உள்ளது				
2.	உடல் ஆரோக்கியமின்மையினால் தங்கள் வேலையில் பாதிப்பு ஏற்பட்டுள்ளது				
3.	அடிக்கடி அழுவதுண்டு				
4.	வருத்தமாக இருப்பதாக உணர்கிறேன்				
5.	வேலையில் கவனம் செலுத்துவது கஷ்டமாக உள்ளது				
6.	வயிற்றுப்புண் பிரச்சனை உள்ளது				
7.	இரவில் தூக்கமின்மை ஏற்படுகிறது				

8.	செரிமானம் இன்மை பிரச்சனை உள்ளது				
9.	தசைகள் இறுக்கமாக இருப்பதாக உணர்கிறேன்				
10.	களைப்பாக, சோர்வாக இருப்பதாக உணர்கிறேன்				
11.	தலைபாரம் ஏற்படுகிறது				
12.	நெஞ்சு படபடவென இருக்கிறது				
	II.பணிசெய்யும் இடம்				
13.	அடிக்கடி வேலைக்கு வராமல் இருக்கிறேன்				
14.	வேலை செய்யும் இடத்தில் பொறுப்புக்களை தவிர்த்துள்ளேன்				
15.	வேலை மனநிறைவை தருகிறது				
16.	வேலை பளு அதிகமாக இருப்பதாக உணர்கிறேன்				
17.	வேலையில் மேல் அதிகாரிகளுடன் பிரச்சனை உள்ளது.				
18.	தீர்மானம் முடிவு எடுப்பதில் பிரச்சனையாக இருக்கிறது				
19.	உடன் பணியாளருடன் நல்ல உறவு முறையில் இருக்கிறேன்				
	III.தன் உணர்வு				
20.	அதிக திறமை இல்லை என்று நினைக்கிறேன்				
21.	நான் எடுக்கும் பாடப்பகுதியில் எனக்கு போதிய அளவு – அறிவு, ஞானம் இல்லை என்று நினைக்கிறேன்				
22.	கெட்ட நினைவுகளின் சிந்தனை அடிக்கடி வருகிறது				
23.	பணியில் தொடர்ந்து ஈடுபடுவது கஷ்டமாக உள்ளது				
24.	பாடம் எடுக்கும் போது மாணவர்களை				

	கட்டுப்படுத்துவது கஷ்டமாக இருக்கிறது.				
25.	எதிர்காலத்தை பற்றிய நம்பிக்கை இல்லை என்று நினைக்கிறேன்				
26.	பயப்படுவதாக உணர்கிறேன்.				
27.	நான் தனிமையாக இருப்பதாக உணர்கிறேன்				
28.	என்னை பிறர் விரும்பவில்லை என்று நினைக்கிறேன்				
29.	நான் செய்த அனைத்து செயல்களும் அதிக முயற்சியுடன் செய்ததாக நினைக்கிறேன்				
30.	மனசோர்வு உள்ளதாக உணர்கிறேன்				

### B. SCORING KEY

SI NO	NEVER	SOMETIMES	FAIRLY OFTEN	ALWAYS
1.	1	2	3	4
2.	1	2	3	4
3.	1	2	3	4
4.	1	2	3	4
5.	1	2	3	4
6.	1	2	3	4
7.	1	2	3	4
8.	1	2	3	4
9.	1	2	3	4
10.	1	2	3	4
11.	1	2	3	4
12.	1	2	3	4
13.	1	2	3	4
14.	1	2	3	4
15.	1	2	3	4
16.	1	2	3	4
17.	1	2	3	4
18.	1	2	3	4
19.	1	2	3	4



<b>20.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>21.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>22.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>23.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>24.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>25.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>26.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>27.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>28.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>29.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>30.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

**MAXIMUM SCORE - 120**

**MINIMUM SCORE -30**

### **e. REQUISITION LETTER TO MEDICAL GUIDE**

**FROM**

Ms. A. Kanaga Jothi,  
M.Sc.(N) II year,  
Karpaga Vinayaga College of Nursing,  
Pudukkottai.

**TO**

Dr. RAJESH KUMAR., M.B.B.S., D.P.M.,  
Consultant Psychiatrist,  
Dr. Muthulakshmi Memorial Head Quarters Hospital,  
Pudukkottai.

**THROUGH,**

The Principal,  
Karpaga Vinayaga College of Nursing  
Pudukkottai.

Respected Sir,

**Sub: Requesting permission for the guidance to conduct the study,  
regarding.**

...

I am II year M.Sc Nursing student of Karpaga Vinayaga College of Nursing Pudukkottai. I would like to conduct a study as a part of partial fulfillment for the degree of masters in nursing. The statement of the problem "A quasi experimental study to evaluate the effectiveness of progressive muscle relaxation technique on stress reduction among selected private higher secondary school teachers Pudukkottai".

I humbly request you to give me guidance and suggestions for conducting my study.

Thanking you in anticipation

**Place:**

Yours Faithfully,

**Date:**

(A. KANAGA JOTHI)

### **c. LETTER REQUESTING FOR VALIDATION**

FROM

Ms.A. Kanaga Jothi,  
M.Sc.(N) II year,  
Karpaga Vinayaga college of Nursing,  
Pudukkottai.

TO:

THROUGH,

The Principal  
Karpaga Vinayaga College of Nursing  
Pudukkottai.

Respected Madam

Sub: Requisition for content validity of tool.

I am A. Kanaga Jothi doing M.Sc(Nursing) second year in Karpaga Vinayaga College of Nursing Pudukkottai, Under The Tamilnadu, Dr. M.G.R Medical university, Chennai. As a partial fulfillment of my M.Sc (N)Degree programme. I am conducting a research on "A quasi experimental study to evaluate the effectiveness of progressive muscle relaxation technique on stress reduction among selected private higher secondary school teachers ,Pudukkottai". A tool has been developed for the research study.

I am sending the tool for content validity and for your expert and valuable opinion.

I will be very thankful for your kind consideration. Kindly return it to the Undersigned.

Thanking you.

Yours Sincerely,

(A. KANAGA JOTHI)

Encl:

- 1.Certificate of content validity,
- 2.Statement of the problem, objectives, hypothesis, research methodology.
- 3.Description of tool and tool for data collection
- 4.Self addressed envelope.

## **APPENDIX - D**

### **D - LETTERS**

#### **a. LETTER SEEKING PERMISSION TO CONDUCT THE RESEARCH STUDY**

From

MS. A. KANAGA JOTHI

II Yr. M.Sc .,(N)

Karpaga Vinayaga College of Nursing

Pudukkottai.

To

The Principal,

Karpaga Vinayaga College of Nursing

Pudukkottai.

Respected Madam,

**Sub: Letter seeking permission to conduct validity.**

I am a final year M.Sc., Nursing student of Karpaga Vinayaga College of Nursing. I would like to conduct a study as a part of partial fulfillment for the degree of masters in nursing. The statement of the problem is " **A quasi experimental study to evaluate the effectiveness of progressive muscle relaxation technique on stress reduction among selected private higher secondary school teachers , Pudukkottai during the year 2015**"

Thanking you in anticipation

Yours Faithfully

( A. KANAGA JOTHI)

## **b. LETTER GRANTING PERMISSION TO CONDUCT THE RESEARCH STUDY**

From

Ms. A. Kanaga Jothi,  
M.Sc(N) II year,  
Karpaga Vinayaga College of Nursing,  
Pudukkottai.

To

Through

The Principal,  
Karpaga Vinayaga College Of Nursing,  
Pudukkottai.

Respected madam/sir,

**SUB: Requesting permission to conduct the research study, regarding.**

I am Ms. Kanaga Jothi final year M.Sc(N) student of Karpaga Vinayaga College Of Nursing, Pudukkottai, to conduct a research project which is to be submitted to the Tamil Nadu Dr. M.G.R. Medical University, Chennai as partial fulfillment of University requirement for award of M.Sc(N) Degree.

**TOPIC: A quasi experimental study to evaluate the effectiveness of progressive muscle relaxation technique on stress reduction among selected private higher secondary school teachers , Pudukkottai**

I humbly request you to grant permission to conduct research study in your school. I will be highly grateful to you for your favour.

Thanking you

**Place:**

**Yours Sincerely,**

**Date:**

**(A. KANAGA JOTHI)**

#### **d. LIST OF EXPERTS FOR CONTENT VALIDITY**

**1. Dr. P.R. Rajesh Kumar, M.B.B.S. D.P.M**

**Consultant Psychiatrist,**

**Lava Clinic,**

**Pudukkottai.**

**2. Prof. Mrs. S.Sumithra M.Sc(N)., Ph.D**

**Principal**

**Karpaga Vinayaga College Of Nursing**

**Pudukkottai.**

**3. Prof. Mrs. Vanitha Innocent Rani, M.Sc(N).,**

**Principal,**

**Our Lady Of Health College Of Nursing**

**Thanjavur.**

**4. Prof. Dr. R. Jancy Rachel Daisy, M.Sc(N)., [PhD]**

**Professor,**

**HOD Of Mental Health Nursing,**

**C.S.I. Jeyaraj Annapackiam College of Nursing,**

**Madurai.**

**5. Mrs. V. Jesinda Vedanayagi, M.Sc.(N).,**

**Professor,**

**HOD Of Mental Health Nursing,**

**Sacred Heart Nursing College,**

**Madurai..**

**6. Mrs. M. Vanichitradevi M.Sc(N)**

**Viceprincipal**

**Karpaga Vinayaga College of Nursing**

**Pudukkottai.**

**7. Mr. M. Selvaraj, M.Sc(N).,**

**Professor,**

**HOD Of Mental Health Nursing,**

**VPMM College Of Nursing,**

**Krishnankovil.**

**E. MODIFIED JACOBSONS PROGRESSIVE MUSCLE RELAXATION  
TECHNIQUE  
(30 MINUTES)**

**CONDUCTIVE ENVIRONMENT:**

The setting for relaxation technique is quiet and free of directing noises. They will be kept physically comfortable in supine position.

**FREQUENCY:**

The people will be assisted to perform muscle relaxation exercise once with investigator.

**GENERALINSTRUCTION:**

Before and during muscle relaxation exercise. (These instructions are kept simple and clear and are easily understood and gives clear picture of how to cooperate during exercise regimen.)

1. Lie down on the bed as comfortable as possible : keep your body loose light and free.
2. Calm and comfortable
3. Keep your eyes closed
4. Avoid stray thoughts
5. Avoid extra movements of the body
6. During the part of the exercise cycle, tense the muscle tightly and hold for slow count of 5-7 sec.
7. Repeat each exercise 3 times
8. During the relaxation part of the exercise cycle, relax the muscle quickly and is feeling
9. Try to keep all other muscle relaxed as we exercise specific muscle groups.
10. As we exercise from head to toe, observe changes like tightness and the development of light and smoothing sensation. Relax takes 3 deep breaths inhaling through nose and exhaling through mouth after step completely relax for 30 seconds to a minute between each step. Now make your body completely loose and free. Let us begin your exercise.



**PROCEDURE:****I. FACIAL MUSCLE:**

1. Tense muscle of the face by wrinkling your forehead, frowning and squinting eyes.
2. Clench your teeth
3. Purse your lips
4. Push tongue to the roof of your mouth
5. Lift your eyebrows with your eye still closed
6. Relax completely

**II. NECK AND SHOULDER:**

1. Bend head back then forward so chin touch chest
2. Tense shoulder by tightening and shrugging shoulder
3. Relax completely

**III. CHEST:**

1. Clench each fits separately and feel the tension
2. Clench both fits together
3. Relax completely

**IV. HANDS:**

1. Clench each fits separately and feel the tension
2. Clench both fits together
3. Relax completely

**V. LOWER ARMS:**

1. Make fist and bend arms up at the elbow with your reaching for something then relax it.
2. Repeat with left arm
3. Relax completely

**VI. UPPER ARMS:**

1. Stretch out right arm in front of you like reaching for something then relaxes it.
2. Repeat with left arm
3. Relax completely

**VII. BACK:**

1. Arch your back
2. Relax completely

**VIII. ABDOMEN:**

1. Tense abdomen by drawing in muscles
2. Relax completely

**IX. THIGHS AND BUTTOCKS:**

1. Tense both thigh muscles and buttocks by squeezing.
2. Relax completely

**X. LOWER LEGS:**

1. Point toes towards your head then away from your head.
2. Relax completely

**XI. TOES:**

1. Curl toes up
2. Relax completely

**AFTER THE EXERCISE:**

1. Relax whole body completely
2. Keep your eyes closed for about 2 minutes and let yourself remain in the relaxed position
3. Open your eye and enjoy renewed energy, feel relaxed and refreshed.
4. Sit up, stretch and stand up slowly.

[JACOBSON]

## ஜாக்கப்சனின் மாற்றி அமைக்கப்பட்ட தசை தளர்ச்சி பயிற்சி

30 நிமிடம்

### I. தகுந்த நிலை

பயிற்சி செய்யும் இடம் அமைதியான இடமாகவும், சப்தம் இல்லாத இடமாகவும் இருக்க வேண்டும். பயிற்சி செய்வோர் மல்லாந்து படுத்துக் கொள்ளவும்.

### II. அடிக்கடி நிகழும் தன்மை

பயிற்சி செய்வோர் ஒருமுறை பயிற்சியாளரோடு செய்து பழகிக் கொள்ள வேண்டும்.

தகுந்த நிலை

பயிற்சி செய்யும் போது முன்பும், பின்பும் செய்ய வேண்டியவை

1. கட்டிலில் தகுந்த இடத்தில் படுத்த பின் உடலை தளர்ந்த நிலையில் விடவும்
2. உடலும் மனமும் அமைதியான நிலையில் இருக்க வேண்டும்
3. கண்களை மூடிக் கொள்ள வேண்டும்
4. சிந்தனையை ஒரு முகப்படுத்த வேண்டும்
5. உடலின் அசைவுகளை நிறுத்த வேண்டும்
6. உடற்பயிற்சியின் போது தசைகளை இறுக்கமாக்கி 5 – 7 என எண்ண வேண்டும்
7. ஒவ்வொரு பயிற்சிணையும் 3 முறை செய்ய வேண்டும்
8. ஒவ்வொரு முறை பயிற்சியின் போது தசைகளை இறுக்கமாக்கி பின், தளர்ந்த நிலை அடைய செய்ய வேண்டும்.
9. அனைத்து தசைகளும் தளர்ந்த நிலையில் இருக்க வேண்டும்
10. தலை முதல் விரல் வரை செய்யும் இந்த பயிற்சியின் போது உடலின் இறுக்கத்தையும், தளர்ச்சியையும் உணர வேண்டும்
11. ஒவ்வொரு முறை பயிற்சி முடியும் போது காற்றை மூக்கின் வழியாக உள்இழுத்து வாயின் வழியாக வெளியேற்ற வேண்டும்
12. இப்பொழுது உடலை முழுவதும் தளர்ந்த நிலையில் விட வேண்டும்
13. பின்பயிற்சியை தொடர வேண்டும்

பயிற்சி செய்யும் முறை

### I. முகத்தின் தசைகள்

1. நெற்றியை சுருக்கி, புருவத்தை சுழித்து ஒன்றாக சேர்த்து கண்களை நேராக பார்த்து முகத்தின் தசைகளை இறுக்கமான நிலைக்கு கொண்டு வரவேண்டும்.
2. பற்களை சுருக்க வேண்டும்
3. உதட்டை சுளுக்க வேண்டும்
4. நாவை (நாக்கை) வாயின் மேல் பகுதியை நோக்கி தள்ள வேண்டும்
5. புருவத்தை மேல் நோக்கி உயர்த்த வேண்டும்
6. பின் முழுவதையும் தளர்ந்த நிலைக்கு கொண்டு வர வேண்டும்.

## **II.கழுத்து மற்றும் தோல்பட்டை**

1. முதலில் கழுத்தை பின்பக்கம் திருப்பவும் / வளைக்கவும் பிறகு முன்பக்கமாக வளைத்து தாடை மார்பு தொடும் படி செய்ய வேண்டும்.
2. தோள்பட்டையை உயர்த்தி, இறுக்கமாக்குவதன் மூலம், தோள் பட்டையின் தசைகளை இறுக்கமடைய செய்ய வேண்டும்.
3. பிறகு தசைகளை தளர்ந்த நிலையில் விடவேண்டும்

## **III.மார்பு**

1. காற்றை உள்வாங்கி அதை 5 – 7 நொடி நிறுத்தி வைத்து மார்பு தசைகளை பின் இறுக்கம் அடைய செய்ய வேண்டும்

## **IV.கைகள்**

1. கைகளை இறுக்கமாக மூடி அதன் இறுக்கத்தை உணரவேண்டும்
2. இரு கைகளையும் ஒன்றாக இறுக்கமாக வேண்டும்
3. பிறகு தசைகளை தளர்ந்த நிலையில் விடவேண்டும்

## **V.கீழ்கை**

1. வலது கீழ்கையை முழங்கையை நோக்கி திருப்ப வேண்டும்
2. பிறகு இடது கீழ்கையை இடது முழங்கையை நோக்கி திருப்ப வேண்டும்
3. பிறகு தளர்ந்த நிலையில் விடவேண்டும்.

## **VI.மேல்கை**

1. முதலில் வலது மேல் கையை முன்னோக்கி நீட்டி தசைகளை இறுக்கமாக்கி பின் தளர்ந்த நிலையில் விடவேண்டும்
2. இதே போல் இடது மேல்கையை செய்ய வேண்டும்

3. பிறகு முழுவதும் தளர்ந்த நிலையில் விடவேண்டும்

## **VII.முதுகுபுறம் / உடலின் பின்புறம்**

1. முதுகு புறத்தை வளைக்க வேண்டும்
2. பிறகு தளர்ந்த நிலையில் விடவேண்டும்

## **VIII.வயிறு**

1. வயிறு பகுதி தசைகளை உள்நோக்கி இழுத்து, அவற்றை இறுக்கமாக்க வேண்டும்.

## **IX. தொடை மற்றும் இடுப்பு**

1. தொடை மற்றும் இடுப்பு பகுதி தசைகளை சுருக்கி, இறுக்கமாக வேண்டும்.

## **X.கால்கள்**

1. தொடை தசைகளை இறுக்கமாக்க வேண்டும்
2. பிறகு தளர்ந்த நிலையில் விடவேண்டும்

## **XI.கால்விரல்கள்**

1. கால்விரல்களை மேல்நோக்கி சுருண்ட நிலைக்கு கொண்டு வரவேண்டும்
2. பிறகு தளர்ந்த நிலையில் விடவேண்டும்.

## **பயிற்சிக்கு பிறகு**

1. முழு உடலையும் தளர்ந்த நிலையில் விடவேண்டும்
2. கண்களை 2 வினாடி மூடவேண்டும் மற்றும் உடலை அதே தளர்ந்த நிலையில் இருக்க வேண்டும்
3. கண்களை திறந்து புத்துணர்ச்சியை பெற்று மகிழ்ச்சி அடையலாம்
4. நேராக உட்கார்ந்து பிறகு மெதுவாக எழுந்திருக்க வேண்டும்